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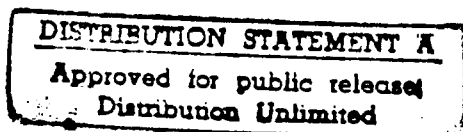
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**Ninety Day Subchronic  
Oral Toxicity Study of  
Pyridostigmine Bromide in Rats**

**(Volume 2 of 2)  
(Part 2)**

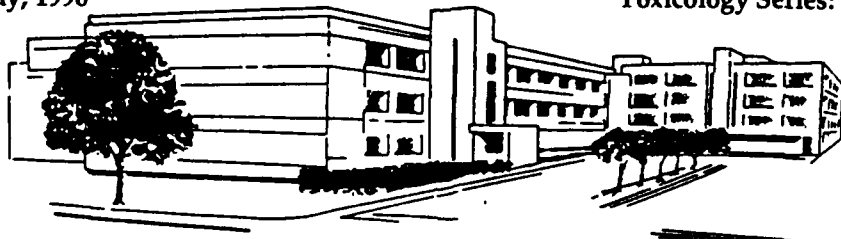
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**MAMMALIAN TOXICOLOGY BRANCH  
DIVISION OF TOXICOLOGY**



May, 1990

Toxicology Series: 185



LETTERMAN ARMY INSTITUTE OF RESEARCH PRESIDIO OF SAN FRANCISCO CALIFORNIA 94129

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Ninety Day Subchronic Oral Toxicity Study of Pyridostigmine Bromide in Rats  
(Toxicology Series 185)--  
Morgan *et al.*

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This research was conducted in compliance with the "Guide for the Care and Use of Laboratory Animals," NIH Publication No. 85-23, as prepared by the Institute of Laboratory Animal Resources, National Research Council.

This material has been reviewed by Letterman Army Institute of Research and there is no objection to its presentation and/or publication. The opinions or assertions contained herein are the private views of the author(s) and are not to be construed as official or as reflecting the views of the Department of the Army or the Department of Defense. (AR 360-5)

*Donald G. Corby*

Donald G. Corby  
COL, MC  
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*2 May 90*  
(date)

## REPORT DOCUMENTATION PAGE

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19. ABSTRACT (Continue on reverse if necessary and identify by block number) The 90-day subchronic oral toxicity of pyridostigmine bromide was evaluated in male and female Sprague-Dawley rats. Pyridostigmine was administered in the diet at dose levels of 0, 1, 10, 30, 60, and 90 mg/kg/day for 90 days. The addition of pyridostigmine to the diet resulted in dose- related decreases in plasma cholinesterase and erythrocyte acetylcholinesterase activity ranging from 5% to 76% and from 18% to 95%, respectively. Toxic signs associated with the decrease in cholinesterase activity included muscarinic (perianal, perioral, and periocular stains or material, diarrhea, and increased salivation) and nicotinic (hypertonia and tremors) effects. Other signs observed with increased incidence among pyridostigmine-treated animals included irritability, aggression, increased startle reflex, inactivity, jumping, hyperactivity, and chewing. The addition of pyridostigmine to the diet at the 60 and 90 mg/kg/day dose levels resulted			
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19 (cont.) in transient reduction in food and water consumption, and correspondingly reduced weight gains for the first two weeks of the study period. Blood samples taken at necropsy for hematological and serum chemistry analyses exhibited no significant ( $p \leq 0.05$ ) abnormalities that could be attributed to pyridostigmine dosing, and no morphologic signs of pyridostigmine-induced toxicity were detected during necropsy or subsequent microscopic examination of the tissues. These findings indicate that pyridostigmine bromide, when administered for 90 days to rats at doses that produce up to 75% inhibition of cholinesterase activity, produces little subchronic toxicity other than that attributable to cholinesterase inhibition.



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## Appendix O: PATHOLOGY

### GLP STUDY # 86005 Pathology Report

#### I. INTRODUCTION:

Study: 90-Day Oral Subchronic Toxicity Test

Test Compound: Pyridostigmine Bromide

Animal: *Rattus norvegicus*, Sprague-Dawley, 5 weeks, 90  
Males and 90 Females.

Dosage Groups:

Group	Daily Dose (mg/kg B.W.)	28-Day Sacrifice (Interim Sacrifice)	90-Day Sacrifice (Final Sacrifice)
1 (Control)	0	5 males, 5 females	10 males, 10 females
2	1	5 males, 5 females	10 males, 10 females
3	10	5 males, 5 females	10 males, 10 females
4	30	5 males, 5 females	10 males, 10 females
5	60	5 males, 5 females	10 males, 10 females
6	90	5 males, 5 females	10 males, 10 females

Reference: SOP-OP-STX-74

#### II. SUMMARY OF PROCEDURES:

Euthanasia: Sodium Pentobarbital, IP.

Organ Weights: Brain, Liver, Kidney, Heart, Spleen,  
Adrenal, and Testes or Ovaries.

Fixative: 10% Neutral Buffered Formalin.

Histopathology: Routine.

Clinical Lab: Hematology/Serology.

III. ORGAN WEIGHT FINDINGS: Pathology Tables in the report are organized in sets of four, the first two have data from the final and interim sacrifices, respectively, of the males, and the second pair has the corresponding information from the females. Most tables of final sacrifice data for males have sacrifice dates listed as 1-Feb-87 to 6-Feb-87. Also, in these and other pathology tables, males are reported from Xybion file 86005 and females from Xybion file 2GLP8605. Summaries of absolute organ weight data by dosage group are presented in Pathology Tables 1, 2, 3, and 4. Pathology Tables 5-8 have group summaries of organ weights as a percentage of body weight, and Pathology Tables 9-12 have group summaries of organ weights as a percentage of brain weight. Analysis of variance of group means, and either Dunnett's t-test (for data homogeneous by Bartlett's test) or a modified t-test (for nonhomogeneous data), were performed for each organ from each of the three types of organ weight summary. Of the 84 t-tests performed, significant

### Appendix O (cont.): PATHOLOGY

differences,  $p < 0.05$ , from control values were found for three organs from males and one from females. The high-dose males at interim sacrifice, Pathology Table 2, had (t-test:  $0.01 < p < 0.05$ ) decreased absolute weights of liver ( $F=0.080$ ) and spleen ( $F=0.203$ ), but percent organ-to-body weight and organ-to-brain weight ratios were not significantly altered. The mean terminal body weight was lower than that of the controls at this time, but the difference was not significant. The cause of decreased hepatic and splenic weights was not determined. High-dose males at final sacrifice, Pathology Table 5, had an increase (t-test:  $0.01 < p < 0.05$ ,  $F=0.167$ ) in the percent adrenal weight to body weight ratio, but not in either the absolute organ weight or percent organ to brain weight ratio. Low dose females, Pathology Table 3, had increased absolute ovarian weights (t-test:  $0.01 < p < 0.05$ ,  $F=0.098$ ) but the organ to body weight and organ to brain weight ratios were not increased. Among the 84 analyses of variance conducted, the F statistic was less than 0.05 in only one, with percent organ to body weight ratio, spleens from females ( $F=0.004$ ) at the interim sacrifice. No differences were found by the t-test.

IV. GROSS FINDINGS: Gross findings from the final and interim sacrifices are summarized in Pathology Tables 13-16. All gross findings are interpreted as incidental and unrelated to treatment.

V. MICROSCOPIC FINDINGS: Tissues saved for microscopic examination from all groups were: Adrenal, aorta, femur, brain, sternum, cecum, colon, diaphragm, duodenum, ear, *extensor digitorum longus* muscle, exorbital lacrimal gland, esophagus, eyes with optic nerve, Harderian gland, heart, ileum, jejunum, kidney, liver, lungs, submandibular lymph node, mammary gland, mesenteric lymph node, mandibular/submandibular salivary gland, nose/turbinates, ovaries, pancreas, parotid salivary gland, pituitary, parathyroid, rectum, spinal cord, skin, sublingual salivary gland, skeletal muscle, sciatic nerve, soleus muscle, spleen, stomach, thyroid, thymus, tongue, trachea, urinary bladder, uterus, male accessory sex organs and testes. All tissues were examined in animals from the 0 and 90 mg/kg/day dose groups. Diaphragm, *extensor digitorum longus* muscle, kidney, liver, lung, and soleus muscle were examined in animals from all dose groups. Gross lesions were examined from all animals. Pathology Tables 17-20 list the incidence summary (with percentages) of all microscopic observations of all tissues from the final and interim sacrifices. Based on

**Appendix O (cont.): PATHOLOGY**

results of Kolmogorov-Smirnov two-tailed analysis (95% confidence level) of microscopic findings, Pathology Tables 21-24, no lesion was significantly more frequent in a treated group than in the control group, from either sex. A similar analysis, not shown, was also made with animals from both final and interim sacrifices grouped together; no significant differences were found. The only neoplastic findings in the study were a renal adenoma observed in Group 5 female #86D0845 and lymphosarcoma in both a Group 2 male, #86D0628, and a Group 5 male, #86D0686. The biological significance of these neoplasms with respect to the experimental treatment is unknown. Pathology Annexes A and B have the correlation of gross and microscopic lesions for all males and females, respectively, with any gross findings other than "No Lesions Recognized". Pathology Annex C contains the Individual Animal Reports with organ weight data and gross and microscopic findings for the males; Pathology Annex D has the corresponding information for the females.

VI. SUMMARY COMMENTS: All lesions observed in these rats were interpreted as incidental findings. No morphologic evidence of toxicity due to the test compound was found.

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for Robert L. Morrissey  
COL, VC, USAR  
Diplomate, ACVP  
18 January 1989

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Division of Pathology  
18 January 1989

**Appendix O (cont.): PATHOLOGY**

Glossary of Microscopic Findings

Accessory Sex Organs

--Inflammation, Chronic, Prostate: Aggregates of lymphocytes, perhaps accompanied by a few macrophages are present in the interstitium.

--Inflammation, Acute: Neutrophils are present in the interstitial tissue and in the epithelium and lumens of the glands.

--Atrophy, Prostate: An area of increased fibrous tissue is present in which epithelial cells are diminished in size and number.

--Inflammation, Chronic, Preputial Gland: Aggregates of lymphocytes, perhaps accompanied by a few macrophages are present in the interstitium.

Adrenal

--Cortical Nodular Hypertrophy: A focus of cells with uniformly increased amounts of cytoplasm is present in the cortex.

--Accessory Adrenal: Well-organized, normal-appearing adrenal tissue outside the adrenal capsule.

Diaphragm

--Inflammation, Acute: Neutrophils are present in the interstitium and occasionally within the sarcolemma of myofibers.

--Inflammation, Subacute: The interstitium is infiltrated by lymphocytes, with a few neutrophils and macrophages.

--Inflammation, Chronic: The interstitium is infiltrated by lymphocytes and macrophages.

--Degeneration, Focal: Myofibers on longitudinal and cross section have an increase in eosinophilia, with loss of striation and clumping of the sarcoplasm.

**Appendix O (cont.): PATHOLOGY**

Exorbital Lacrimal Gland

--Atrophy: Decreased size of cells of the acini. Acinar lumens may appear patent, and acini are separated by increased distance.

--Inflammation, Chronic: Interstitial fibrosis is accompanied by aggregates of macrophages, lymphocytes and/or plasma cells.

Harderian Gland

--Inflammation, Chronic: Interstitial periductal tissue is infiltrated by lymphocytes and macrophages. Fibrosis may be present.

Heart

--Inflammation, Chronic: Myocardial interstitial tissue is infiltrated by lymphocytes and a few macrophages. Fibrosis may be present.

Kidney

--B- Adenoma: Benign, expansile, cortical proliferation of tubular epithelial cells.

--Dilation, Pelvis: Self-explanatory.

--Inflammation, Chronic: Interstitial cortical fibrosis accompanied by a few small aggregates of lymphocytes and/or plasma cells.

--Inflammation, Chronic-Active, Serosa: Infiltration of the capsule and surrounding retroperitoneal tissue by macrophages, lymphocytes and neutrophils, with or without fibrosis.

--Mineralization: Small mineralized foci, often intratubular, are present in the renal papilla.

--Nephropathy: Cortical tubules contain homogeneous, brightly eosinophilic material. Small interstitial aggregates of lymphocytes are occasionally present.

**Appendix O (cont.): PATHOLOGY**

**Liver**

--Fatty Change, Focal: Hepatocytes in a single contiguous group contain large discrete round clear vacuoles.

--Inflammation, Chronic, Multifocal: Multifocal infiltration of sinusoids and/or portal areas with a mixed population of mononuclear cells. Some fibrosis and/or slight bile duct hyperplasia may be present in these foci.

--M- Lymphoma / Lymphosarcoma: Infiltration and frequently obliteration of normal parenchymal and stromal components by a relatively homogeneous population of immature lymphocytes. Mitoses may be frequent.

--Necrosis, Focal: A contiguous group of necrotic hepatocytes.

--Vacuolization, Focal: Hepatocytes in a single contiguous group contain numerous irregular and poorly defined clear vacuoles.

**Lungs**

--Aggregates of Alveolar Macrophages (Histiocytosis): Self-explanatory.

--Inflammation, Acute, Perivascular: Increased numbers of neutrophils in perivascular connective tissue, and occasionally in adjacent alveoli.

--Inflammation, Chronic, Focal: A single aggregate of lymphocytes, plasma cells, and macrophages, without or without fibrosis.

--Inflammation, Chronic, Granulomatous: Focal macrophages, lymphocytes, and giant cells, often surrounding foreign material. Considered to be a reaction to inhaled bedding, etc.

--Inflammation, Chronic, Perivascular: Localized perivascular connective is infiltrated by lymphocytes and plasma cells, with a few macrophages.

## Appendix O (cont.): PATHOLOGY

### Mesenteric Lymph Node

--M- Lymphoma / Lymphosarcoma: Infiltration and, frequently, obliteration of normal parenchymal and stromal components by a relatively homogeneous population of immature lymphocytes. Mitoses may be frequent.

### Mesentery

--Necrosis, Fat: Self-explanatory.

--Inflammation, Acute: Increased numbers of neutrophils are present in extravascular tissue, with or without concomitant edema.

### Ovaries

--Para-ovarian Cyst(s): Thin-walled, fluid-filled cyst(s) in the mesovarium, adjacent to the ovary.

### Pancreas

--Inflammation, Chronic: Interstitial fibrosis infiltration is accompanied by aggregates of macrophages, lymphocytes and/or plasma cells.

--Acinar (Exocrine) Atrophy: A focal decreased in numbers of exocrine acini result in an aggregation of ducts. Fibrous connective tissue may be locally increased.

### Parotid Gland

--Inflammation, Chronic: Interstitial fibrosis is accompanied by aggregates of macrophages, lymphocytes and/or plasma cells.

### Pituitary Gland

--Cyst(s): Ciliated or nonciliated, in any portion of the gland.

### Soleus Muscle

--Degeneration, Focal: Myofibers on longitudinal and cross section have an increase in eosinophilia, with loss of striation and clumping of the sarcoplasm.

**Appendix O (cont.): PATHOLOGY**

--Inflammation, Acute: Neutrophils are present in the interstitium and occasionally within the sarcolemma of myofibers.

--Inflammation, Subacute: The interstitium is infiltrated by lymphocytes, with a few neutrophils and macrophages.

--Inflammation, Chronic: The interstitium is infiltrated by lymphocytes and macrophages.

**Spleen**

--M- Lymphoma/Lymphosarcoma: Infiltration and, frequently, obliteration of normal parenchymal and stromal components by a relatively homogeneous population of immature lymphocytes. Mitoses may be frequent.

--Necrogranuloma: A focus of eosinophilic debris is surrounded by macrophages.

**Sublingual Gland**

--Hyperplasia, Duct: Self-explanatory.

**Submandibular Lymph Node**

--Hyperplasia, Lymphoid: The size and number of follicles is increased, accompanied by an increase in secondary follicles and the number of lymphocytes in the paracortex.

--M- Lymphoma / Lymphosarcoma: Infiltration and frequently obliteration of normal parenchymal and stromal components by a relatively homogeneous population of immature lymphocytes. Mitoses may be frequent.

**Testes**

--Unilateral Organ Atrophy: Self-explanatory.

**Thymus**

--Hemorrhage, Multifocal: Self-explanatory.

**Thyroid**

--Cyst: Squamous epithelial-lined cyst.



**Appendix O (cont.): PATHOLOGY**

--Inflammation, Chronic: Interstitial infiltration of lymphocytes, often forming aggregates. A few macrophages may be present.

Tongue

--Mineralization, Focal: Self-explanatory.

Uterus

--Dilatation of the Uterine Lumen (Hydrometra): Self-explanatory.

--Squamous Metaplasia of the Mucosa: Self-explanatory.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR ABSOLUTE ORGAN WEIGHTS (GMS)  
 STUDY NUMBER: 86005  
 REPORT FOR FINAL SACRIFICE  
 STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

PRINTED: 06-FEB-89  
 PAGE: 1

ORGAN: BRAIN	M A L E A N I M A L S									
	CONTROLS FROM GROUP(S): 1		DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)							
GROUP	2	3	4	5	6					
NUMBER/GROUP	10	10	10	10	10					
WEIGHT MEANS	2.07	1.97	2.17	1.98	1.97					
STANDARD DEVIATIONS	0.10	0.18	0.56	0.13	0.10					
GROUP DIFF. @ P=.05	0.091	0.144	0.407	0.108	0.092					
GROUP DIFF. @ P=.01	0.131	0.207	0.585	0.155	0.132					

ANALYSIS OF VARIANCE: F RATIO = 0.99 DF = 5/ 54 F PROBABILITY = 0.434  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: LIVER	M A L E A N I M A L S									
	CONTROLS FROM GROUP(S): 1		DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)							
GROUP	2	3	4	5	6					
NUMBER/GROUP	10	10	10	10	10					
WEIGHT MEANS	23.93	18.62	19.15	17.60	17.63					
STANDARD DEVIATIONS	16.21	2.99	2.41	2.45	2.02					
GROUP DIFF. @ P=.05	11.75	2.74	2.43	2.45	2.23					
GROUP DIFF. @ P=.01	16.90	3.94	3.49	3.52	3.21					

ANALYSIS OF VARIANCE: F RATIO = 1.14 DF = 5/ 54 F PROBABILITY = 0.349  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
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PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR ABSOLUTE ORGAN WEIGHTS (GMS)

STUDY NUMBER: 86005

REPORT FOR FINAL SACRIFICE

STUDY START DATE: 04-NOV-86

PRINTED: 06-FEB-89  
PAGE: 2

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ORGAN: KIDNEY	CONTROLS FROM GROUP(S):		M A L E A N I M A L S					
	1		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)					
GROUP	2	3	4	5	6			
NUMBER/GROUP	10	10	10	10	10			
WEIGHT MEANS	3.34	3.24	3.23	3.23	3.19			
STANDARD DEVIATIONS	0.27	0.45	0.39	0.37	0.36			
GROUP DIFF. @ P=.05	0.440	0.440	0.440	0.440	0.440			
GROUP DIFF. @ P=.01	0.538	0.538	0.538	0.538	0.538			

ANALYSIS OF VARIANCE: F RATIO = 0.23 DF = 5/ 54 F PROBABILITY = 0.946  
NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: HEART	CONTROLS FROM GROUP(S):		M A L E A N I M A L S					
	1		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)					
GROUP	2	3	4	5	6			
NUMBER/GROUP	10	10	10	10	10			
WEIGHT MEANS	1.52	1.54	1.54	1.43	1.47			
STANDARD DEVIATIONS	0.14	0.11	0.15	0.12	0.13			
GROUP DIFF. @ P=.05	0.161	0.161	0.161	0.161	0.161			
GROUP DIFF. @ P=.01	0.197	0.197	0.197	0.197	0.197			

ANALYSIS OF VARIANCE: F RATIO = 1.33 DF = 5/ 54 F PROBABILITY = 0.265  
NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

Pathology Table 1 (cont.)

## Appendix O (cont.): PATHOLOGY

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SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR ABSOLUTE ORGAN WEIGHTS (GMS)  
STUDY NUMBER: 86005  
REPORT FOR FINAL SACRIFICE

PRINTED: 06-FEB-89  
PAGE: 3

STUDY START DATE: 04-NOV-86 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ORGAN: SPLEEN M A L E A N I M A L S  
CONTROLS FROM GROUP(S): 1 DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)

GROUP	2	3	4	5	6
NUMBER/GROUP	10	10	10	10	10
WEIGHT MEANS	0.71	0.74	0.76	0.75	0.75
STANDARD DEVIATIONS	0.10	0.12	0.14	0.13	0.11
GROUP DIFF. @ P=.05	0.72	0.12	0.13	0.12	0.11
GROUP DIFF. @ P=.01	1.04	0.17	0.18	0.17	0.16

ANALYSIS OF VARIANCE: F RATIO = 1.09 DF = 5/ 54 F PROBABILITY = 0.375  
NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: ADRENAL M A L E A N I M A L S  
CONTROLS FROM GROUP(S): 1 DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)

GROUP	2	3	4	5	6
NUMBER/GROUP	10	10	10	10	10
WEIGHT MEANS	0.0493	0.0555	0.0591	0.0488	0.0658
STANDARD DEVIATIONS	0.0073	0.0156	0.0155	0.0136	0.0169
GROUP DIFF. @ P=.05	0.0191	0.0191	0.0191	0.0191	0.0191
GROUP DIFF. @ P=.01	0.0233	0.0233	0.0233	0.0233	0.0233

ANALYSIS OF VARIANCE: F RATIO = 1.88 DF = 5/ 54 F PROBABILITY = 0.112  
NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

Pathology Table 1 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
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GROUP COMPARISON STATISTICS FOR ABSOLUTE ORGAN WEIGHTS (GMS)

PRINTED: 06-FEB-89  
PAGE: 4

STUDY NUMBER: 86005

REPORT FOR FINAL SACRIFICE

STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ORGAN: OVARIES	CONTROLS FROM GROUP(S):		M A L E A N I M A L S				DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)			
	2	3	4	5	6					
GROUP	CONTROL	0	0	0	0					
NUMBER/GROUP	0	0	0	0	0					
WEIGHT MEANS	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	
STANDARD DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000				0.0000	
GROUP DIFF. @ P=.05	0.0191	0.0191	0.0191	0.0191	0.0191				0.0191	
GROUP DIFF. @ P=.01	0.0233	0.0233	0.0233	0.0233	0.0233				0.0233	

ANALYSIS OF VARIANCE: F RATIO = 0.00 DF = -1/ 0 F PROBABILITY = 0.112

NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: TESTES	CONTROLS FROM GROUP(S):		M A L E A N I M A L S					DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)				
	2	3	4	5	6							
NUMBER/GROUP	10	10	10	10	10							
WEIGHT MEANS	3.21	3.19	3.38	3.08	3.19							
STANDARD DEVIATIONS	0.25	0.50	0.27	0.26	0.18							
GROUP DIFF. @ P=.05	0.378	0.378	0.378	0.378	0.378							
GROUP DIFF. @ P=.01	0.463	0.463	0.463	0.463	0.463							

ANALYSIS OF VARIANCE: F RATIO = 0.89 DF = 5/ 54 F PROBABILITY = 0.497

NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

Pathology Table 1 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH      GROUP COMPARISON STATISTICS FOR ABSOLUTE ORGAN WEIGHTS (GMS)      PRINTED: 06-FEB-89  
 DIV OF RES SUPP, PATH SERV GP      STUDY NUMBER: 86005      PAGE: 1  
 PRESIDIO OF SAN FRANCISCO, CA 94129      REPORT FOR INTERIM SACRIFICE NUMBER 2  
 SPECIES: RAT/SPRAGUE-DAWLEY      STUDY START DATE: 04-NOV-86      STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ORGAN: BRAIN      M A L E      A N I M A L S      DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)

GROUP	2	3	4	5	6
NUMBER/GROUP	5	5	5	5	5
WEIGHT MEANS	1.95	1.97	1.95	1.88	1.94
STANDARD DEVIATIONS	0.08	0.15	0.10	0.15	0.07
GROUP DIFF. @ P=.05		0.190	0.190	0.190	0.190
GROUP DIFF. @ P=.01		0.237	0.237	0.237	0.237

ANALYSIS OF VARIANCE: F RATIO = 0.72      DF = 5/ 24      F PROBABILITY = 0.617  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: LIVER      M A L E      A N I M A L S      DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)

GROUP	2	3	4	5	6
NUMBER/GROUP	5	5	5	5	5
WEIGHT MEANS	17.73	16.38	17.50	16.79	15.77
STANDARD DEVIATIONS	2.90	0.95	2.58	1.32	2.23
GROUP DIFF. @ P=.05		3.51	3.51	3.51	3.51
GROUP DIFF. @ P=.01		4.38	4.38	4.38	4.38

ANALYSIS OF VARIANCE: F RATIO = 2.26      DF = 5/ 24      F PROBABILITY = 0.080  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR ABSOLUTE ORGAN WEIGHTS (GMS)  
STUDY NUMBER: 86005  
REPORT FOR INTERIM SACRIFICE NUMBER 2

PRINTED: 06-FEB-89  
PAGE: 2

STUDY START DATE: 04-NOV-86 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ORGAN: KIDNEY	CONTROLS FROM GROUP(S): 1		M A L E A N I M A L S		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)	
	GROUP	NUMBER/GROUP	2	3	4	5
	CONTROL	5				
		5	2.94	2.92	2.84	2.66
WEIGHT MEANS			0.15	0.26	0.36	0.34
STANDARD DEVIATIONS			0.465	0.465	0.465	0.465
GROUP DIFF. @ P=.05			0.580	0.580	0.580	0.580
GROUP DIFF. @ P=.01						

ANALYSIS OF VARIANCE: F RATIO = 1.98 DF = 5/ 24 F PROBABILITY = 0.118

NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: HEART	CONTROLS FROM GROUP(S): 1		M A L E A N I M A L S		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)	
	GROUP	NUMBER/GROUP	2	3	4	5
	CONTROL	5				
		5	1.55	1.38	1.12	1.27
WEIGHT MEANS			0.34	0.10	0.35	0.23
STANDARD DEVIATIONS			0.424	0.424	0.424	0.424
GROUP DIFF. @ P=.05			0.529	0.529	0.529	0.529
GROUP DIFF. @ P=.01						

ANALYSIS OF VARIANCE: F RATIO = 2.22 DF = 5/ 24 F PROBABILITY = 0.085

NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

Pathology Table 2 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR ABSOLUTE ORGAN WEIGHTS (GMS)  
 STUDY NUMBER: 86005  
 REPORT FOR INTERIM SACRIFICE NUMBER 2  
 STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

PRINTED: 06-FEB-89  
 PAGE: 3

ORGAN: SPLEEN

CONTROLS FROM GROUP(S):		M A L E A N I M A L S					
		DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)					
		1	2	3	4	5	6
GROUP	CONTROL						
NUMBER/GROUP	5						
WEIGHT MEANS	0.743	0.764	0.696	0.958	0.695	0.592	
STANDARD DEVIATIONS	0.094	0.053	0.102	0.503	0.067	0.049	
GROUP DIFF. @ P=.05		0.13	0.17	0.63	0.14	0.13*	
GROUP DIFF. @ P=.01		0.22	0.28	1.04	0.23	0.22	

ANALYSIS OF VARIANCE: F RATIO = 1.58 DF = 5/ 24 F PROBABILITY = 0.203  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: ADRENAL

CONTROLS FROM GROUP(S):		M A L E A N I M A L S					
		DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)					
		1	2	3	4	5	6
GROUP	CONTROL						
NUMBER/GROUP	5						
WEIGHT MEANS	0.199	0.066	0.051	0.057	0.055	0.044	
STANDARD DEVIATIONS	0.329	0.004	0.022	0.007	0.013	0.006	
GROUP DIFF. @ P=.05		0.406	0.407	0.406	0.406	0.406	
GROUP DIFF. @ P=.01		0.668	0.670	0.669	0.669	0.668	

ANALYSIS OF VARIANCE: F RATIO = 0.98 DF = 5/ 24 F PROBABILITY = 0.454  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR ABSOLUTE ORGAN WEIGHTS (GMS)

STUDY NUMBER: 86005

REPORT FOR INTERIM SACRIFICE NUMBER 2

STUDY START DATE: 06-NOV-86

PRINTED: 06-FEB-89  
PAGE: 4

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ORGAN: OVARIES	M A L E A N I M A L S					
	CONTROLS FROM GROUP(S):		1	DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)		
GROUP	2	3	4	5	6	
NUMBER/GROUP	0	0	0	0	0	
WEIGHT MEANS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
STANDARD DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
GROUP DIFF. @ P=.05	0.406	0.407	0.406	0.406	0.406	0.406
GROUP DIFF. @ P=.01	0.668	0.670	0.669	0.669	0.669	0.668

ANALYSIS OF VARIANCE: F RATIO = 0.00 DF = -1/ 0 F PROBABILITY = 0.454  
NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: TESTES	M A L E A N I M A L S					
	CONTROLS FROM GROUP(S):		1	DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)		
GROUP	2	3	4	5	6	
NUMBER/GROUP	5	5	5	5	5	
WEIGHT MEANS	2.91	2.29	3.00	2.66	2.80	2.80
STANDARD DEVIATIONS	0.24	1.50	0.11	0.26	0.12	0.24
GROUP DIFF. @ P=.05		2.35	0.32	0.43	0.32	0.42
GROUP DIFF. @ P=.01		4.18	0.53	0.71	0.53	0.69

ANALYSIS OF VARIANCE: F RATIO = 1.41 DF = 5/ 23 F PROBABILITY = 0.258  
NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

Pathology Table 2 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR ABSOLUTE ORGAN WEIGHTS (GMS)  
 STUDY NUMBER: 2GLP8605  
 REPORT FOR FINAL SACRIFICE  
 STUDY START DATE: 10-DEC-86

PRINTED: 06-FEB-89  
 PAGE: 1

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ORGAN: BRAIN	FEMALE ANIMALS									
	CONTROLS FROM GROUP(S): 1		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)							
GROUP	2	3	4	5	6					
NUMBER/GROUP	10	10	10	10	10					
WEIGHT MEANS	1.81	1.84	1.92	1.83	1.87					
STANDARD DEVIATIONS	0.18	0.12	0.16	0.14	0.16					
GROUP DIFF. @ P=.05		0.177	0.177	0.177	0.177					
GROUP DIFF. @ P=.01		0.216	0.216	0.216	0.216					

ANALYSIS OF VARIANCE: F RATIO = 1.07 DF = 5/ 54 F PROBABILITY = 0.387  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: LIVER	FEMALE ANIMALS									
	CONTROLS FROM GROUP(S): 1		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)							
GROUP	2	3	4	5	6					
NUMBER/GROUP	10	10	10	10	10					
WEIGHT MEANS	10.76	11.78	11.94	11.42	11.62					
STANDARD DEVIATIONS	1.94	2.40	3.10	1.04	1.67					
GROUP DIFF. @ P=.05		2.49	2.49	2.49	2.49					
GROUP DIFF. @ P=.01		3.04	3.04	3.04	3.04					

ANALYSIS OF VARIANCE: F RATIO = 0.41 DF = 5/ 54 F PROBABILITY = 0.842  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAVLEY

GROUP COMPARISON STATISTICS FOR ABSOLUTE ORGAN WEIGHTS (GMS)

STUDY NUMBER: 2GLP8605

REPORT FOR FINAL SACRIFICE

STUDY START DATE: 10-DEC-86

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STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ORGAN: KIDNEY FEMALE ANIMALS DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)

GROUP	CONTROLS FROM GROUP(S): 1					
	2	3	4	5	6	
NUMBER/GROUP	10	10	10	10	10	
WEIGHT MEANS	2.11	2.22	2.14	2.12	2.18	
STANDARD DEVIATIONS	0.34	0.41	0.23	0.21	0.35	
GROUP DIFF. @ P=.05	0.370	0.370	0.370	0.370	0.370	
GROUP DIFF. @ P=.01	0.453	0.453	0.453	0.453	0.453	

ANALYSIS OF VARIANCE: F RATIO = 0.71 DF = 5/ 54 F PROBABILITY = 0.621

NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: HEART FEMALE ANIMALS DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)

GROUP	CONTROLS FROM GROUP(S): 1					
	2	3	4	5	6	
NUMBER/GROUP	10	10	10	10	10	
WEIGHT MEANS	1.07	1.19	1.11	1.09	1.09	
STANDARD DEVIATIONS	0.13	0.23	0.31	0.06	0.13	
GROUP DIFF. @ P=.05	0.134	0.187	0.241	0.102	0.130	
GROUP DIFF. @ P=.01	0.193	0.270	0.347	0.147	0.186	

ANALYSIS OF VARIANCE: F RATIO = 0.97 DF = 5/ 54 F PROBABILITY = 0.463

NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

Pathology Table 3 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR ABSOLUTE ORGAN WEIGHTS (GMS)  
 STUDY NUMBER: 2GLP8605  
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STUDY START DATE: 10-DEC-86  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ORGAN: SPLEEN

GROUP	FEMALE ANIMALS					
	CONTROLS FROM GROUP(S): 1		DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)			
NUMBER/GROUP	2	3	4	5	6	
WEIGHT MEANS	0.600	0.877	0.620	0.591	0.581	
STANDARD DEVIATIONS	0.099	1.002	0.158	0.114	0.088	
GROUP DIFF. @ P=.05	0.10	0.72	0.13	0.11	0.09	
GROUP DIFF. @ P=.01	0.14	1.04	0.19	0.15	0.13	

ANALYSIS OF VARIANCE: F RATIO = 0.87 DF = 5/ 54 F PROBABILITY = 0.507  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: ADRENAL

GROUP	FEMALE ANIMALS					
	CONTROLS FROM GROUP(S): 1		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)			
NUMBER/GROUP	2	3	4	5	6	
WEIGHT MEANS	0.0861	0.0839	0.0855	0.0864	0.0971	
STANDARD DEVIATIONS	0.0206	0.0295	0.0224	0.0245	0.0180	
GROUP DIFF. @ P=.05	0.0261	0.0261	0.0261	0.0261	0.0261	
GROUP DIFF. @ P=.01	0.0319	0.0319	0.0319	0.0319	0.0319	

ANALYSIS OF VARIANCE: F RATIO = 0.95 DF = 5/ 54 F PROBABILITY = 0.458  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR ABSOLUTE ORGAN WEIGHTS (GMS)

STUDY NUMBER: 2GLP8605

REPORT FOR FINAL SACRIFICE

STUDY START DATE: 10-DEC-86

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PAGE: 4

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ORGAN: OVARIES	FEMALE ANIMALS											
	CONTROLS FROM GROUP(S): 1			DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)								
GROUP	2			3			4			5		
NUMBER/GROUP	10			10			10			10		
WEIGHT MEANS	0.155			0.150			0.140			0.143		
STANDARD DEVIATIONS	0.037			0.035			0.024			0.033		
GROUP DIFF. @ P=.05	0.0389*			0.0389			0.0389			0.0389		
GROUP DIFF. @ P=.01	0.0476			0.0476			0.0476			0.0476		

ANALYSIS OF VARIANCE: F RATIO = 1.97 DF = 5/ 54 F PROBABILITY = 0.098

NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

Pathology Table 3 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR ABSOLUTE ORGAN WEIGHTS (GMS)  
 STUDY NUMBER: 26LP8605  
 REPORT FOR INTERIM SACRIFICE NUMBER 2  
 STUDY START DATE: 10-DEC-86

PRINTED: 06-FEB-89  
 PAGE: 1

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ORGAN: BRAIN

GROUP	FEMALE ANIMALS				
	DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)				
NUMBER/GROUP	2	3	4	5	6
WEIGHT MEANS	1.84	1.86	1.79	1.82	1.85
STANDARD DEVIATIONS	0.14	0.09	0.09	0.09	0.09
GROUP DIFF. @ P=.05	0.219	0.219	0.219	0.219	0.219
GROUP DIFF. @ P=.01	0.273	0.273	0.273	0.273	0.273

ANALYSIS OF VARIANCE: F RATIO = 1.21 DF = 5/ 24 F PROBABILITY = 0.336  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: LIVER

GROUP	FEMALE ANIMALS				
	DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)				
NUMBER/GROUP	2	3	4	5	6
WEIGHT MEANS	9.90	11.20	10.60	9.84	9.24
STANDARD DEVIATIONS	2.31	1.25	2.15	1.49	1.02
GROUP DIFF. @ P=.05	2.79	2.79	2.79	2.79	2.79
GROUP DIFF. @ P=.01	3.48	3.48	3.48	3.48	3.48

ANALYSIS OF VARIANCE: F RATIO = 0.99 DF = 5/ 24 F PROBABILITY = 0.445  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR ABSOLUTE ORGAN WEIGHTS (GMS)  
 STUDY NUMBER: 2GLP8605  
 REPORT FOR INTERIM SACRIFICE NUMBER 2  
 STUDY START DATE: 10-DEC-86

PRINTED: 06-FEB-89  
 PAGE: 2

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ORGAN: KIDNEY	F E M A L E      A N I M A L S									
	CONTROLS FROM GROUP(S): 1					DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)				
GROUP	2	3	4	5	6					
NUMBER/GROUP	5	5	5	5	5					
WEIGHT MEANS	1.86	1.82	1.94	1.98	1.85					
STANDARD DEVIATIONS	0.21	0.20	0.11	0.26	0.18					
GROUP DIFF. @ P=.05		0.337	0.337	0.337	0.337					
GROUP DIFF. @ P=.01		0.420	0.420	0.420	0.420					

ANALYSIS OF VARIANCE: F RATIO = 0.46    DF = 5/ 24    F PROBABILITY = 0.802  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: HEART	F E M A L E      A N I M A L S									
	CONTROLS FROM GROUP(S): 1					DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)				
GROUP	2	3	4	5	6					
NUMBER/GROUP	5	5	5	5	5					
WEIGHT MEANS	0.91	0.91	0.92	0.98	1.01					
STANDARD DEVIATIONS	0.12	0.14	0.17	0.09	0.16					
GROUP DIFF. @ P=.05		0.246	0.246	0.246	0.246					
GROUP DIFF. @ P=.01		0.307	0.307	0.307	0.307					

ANALYSIS OF VARIANCE: F RATIO = 0.52    DF = 5/ 24    F PROBABILITY = 0.758  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR ABSOLUTE ORGAN WEIGHTS (GMS)  
 STUDY NUMBER: 2GLP8605  
 REPORT FOR INTERIM SACRIFICE NUMBER 2  
 STUDY START DATE: 10-DEC-86

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

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ORGAN: SPLEEN	FEMALE ANIMALS				
	CONTROLS FROM GROUP(S): 1 DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)				
GROUP	2	3	4	5	6
NUMBER/GROUP	5	5	5	5	5
WEIGHT MEANS	0.582	0.618	0.568	0.562	0.708
STANDARD DEVIATIONS	0.049	0.078	0.089	0.123	0.070
GROUP DIFF. @ P=.05		0.145	0.145	0.145	0.145
GROUP DIFF. @ P=.01		0.181	0.181	0.181	0.181

ANALYSIS OF VARIANCE: F RATIO = 2.34 DF = 5/ 24 F PROBABILITY = 0.072  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: ADRENAL	FEMALE ANIMALS				
	CONTROLS FROM GROUP(S): 1 DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)				
GROUP	2	3	4	5	6
NUMBER/GROUP	5	5	5	5	5
WEIGHT MEANS	0.0726	0.0748	0.0844	0.0792	0.0766
STANDARD DEVIATIONS	0.0122	0.0127	0.0302	0.0185	0.0080
GROUP DIFF. @ P=.05	0.0314	0.0314	0.0314	0.0314	0.0314
GROUP DIFF. @ P=.01	0.0391	0.0391	0.0391	0.0391	0.0391

ANALYSIS OF VARIANCE: F RATIO = 0.65 DF = 5/ 24 F PROBABILITY = 0.668  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR ABSOLUTE ORGAN WEIGHTS (GMS)

STUDY NUMBER: 26LP8605

REPORT FOR INTERIM SACRIFICE NUMBER 2

STUDY START DATE: 10-DEC-86

PRINTED: 06-FEB-89  
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STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ORGAN: OVARIES

NUMBER/GROUP	FEMALE ANIMALS					
	CONTROLS FROM GROUP(S): 1		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)			
WEIGHT MEANS	CONTROL	2	3	4	5	6
STANDARD DEVIATIONS	5	5	5	5	5	5
GROUP DIFF. @ P=.05	0.160	0.176	0.157	0.166	0.143	0.161
GROUP DIFF. @ P=.01	0.020	0.056	0.036	0.023	0.016	0.025
		0.0566	0.0566	0.0566	0.0566	0.0566
		0.0706	0.0706	0.0706	0.0706	0.0706

ANALYSIS OF VARIANCE: F RATIO = 0.54 DF = 5/ 24 F PROBABILITY = 0.743

NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

Pathology Table 4 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR % ORGAN TO BODY WEIGHT RATIO  
 STUDY NUMBER: 86005  
 REPORT FOR FINAL SACRIFICE  
 STUDY START DATE: 04-NOV-86  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

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ORGAN: BRAIN

GROUP	M A L E A N I M A L S					
	CONTROLS FROM GROUP(S): 1		DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)			
NUMBER/GROUP	2	3	4	5	6	
WEIGHT MEANS	10	10	10	10	10	
STANDARD DEVIATIONS	0.397	0.364	0.397	0.368	0.365	
GROUP DIFF. @ P=.05	0.035	0.046	0.105	0.036	0.036	
GROUP DIFF. @ P=.01	0.036	0.042	0.080	0.036	0.036	
	0.052	0.060	0.115	0.052	0.052	

ANALYSIS OF VARIANCE: F RATIO = 0.82 DF = 5/ 54 F PROBABILITY = 0.546  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: LIVER

GROUP	M A L E A N I M A L S					
	CONTROLS FROM GROUP(S): 1		DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)			
NUMBER/GROUP	2	3	4	5	6	
WEIGHT MEANS	10	10	10	10	10	
STANDARD DEVIATIONS	3.42	3.41	3.48	3.25	3.24	
GROUP DIFF. @ P=.05	0.23	0.28	0.33	0.34	0.23	
GROUP DIFF. @ P=.01	3.04	0.26	0.29	0.29	0.24	
	4.37	0.37	0.42	0.42	0.34	

ANALYSIS OF VARIANCE: F RATIO = 1.24 DF = 5/ 54 F PROBABILITY = 0.304  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR % ORGAN TO BODY WEIGHT RATIO  
STUDY NUMBER: 86005  
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STUDY START DATE: 04-NOV-86 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ORGAN: KIDNEY	M A L E A N I M A L S					
	CONTROLS FROM GROUP(S): 1		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)			
GROUP	2	3	4	5	6	
NUMBER/GROUP	10	10	10	10	10	
WEIGHT MEANS	0.581	0.643	0.595	0.587	0.596	0.588
STANDARD DEVIATIONS	0.046	0.098	0.049	0.050	0.043	0.048
GROUP DIFF. @ P=.05		0.0695	0.0695	0.0695	0.0695	0.0695
GROUP DIFF. @ P=.01		0.0850	0.0850	0.0850	0.0850	0.0850

ANALYSIS OF VARIANCE: F RATIO = 1.48 DF = 5/ 54 F PROBABILITY = 0.211

NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: HEART	M A L E A N I M A L S					
	CONTROLS FROM GROUP(S): 1		DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)			
GROUP	2	3	4	5	6	
NUMBER/GROUP	10	10	10	10	10	
WEIGHT MEANS	0.286	0.291	0.285	0.280	0.265	0.271
STANDARD DEVIATIONS	0.039	0.031	0.028	0.011	0.023	0.020
GROUP DIFF. @ P=.05		0.0356	0.0346	0.0291	0.0326	0.0314
GROUP DIFF. @ P=.01		0.0512	0.0498	0.0419	0.0468	0.0452

ANALYSIS OF VARIANCE: F RATIO = 1.39 DF = 5/ 54 F PROBABILITY = 0.242

NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

Pathology Table 5 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH      GROUP COMPARISON STATISTICS FOR % ORGAN TO BODY WEIGHT RATIO      PRINTED: 06-FEB-89  
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 PRESIDIO OF SAN FRANCISCO, CA 94129      REPORT FOR FINAL SACRIFICE  
 SPECIES: RAT/SPRAGUE-DAWLEY      STUDY START DATE: 04-NOV-86      STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ORGAN: SPLEEN	M A L E      A N I M A L S					
	CONTROLS FROM GROUP(S): 1		DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)			
GROUP	2	3	4	5	6	
NUMBER/GROUP	10	10	10	10	10	
WEIGHT MEANS	0.131	0.224	0.136	0.138	0.139	0.139
STANDARD DEVIATIONS	0.022	0.255	0.014	0.018	0.017	0.021
GROUP DIFF. @ P=.05		0.184	0.019	0.020	0.020	0.022
GROUP DIFF. @ P=.01		0.264	0.027	0.029	0.029	0.031

ANALYSIS OF VARIANCE: F RATIO = 1.15      DF = 5/ 54      F PROBABILITY = 0.344  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: ADRENAL	M A L E      A N I M A L S					
	CONTROLS FROM GROUP(S): 1		DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)			
GROUP	2	3	4	5	6	
NUMBER/GROUP	10	10	10	10	10	
WEIGHT MEANS	0.0091	0.0108	0.0110	0.0089	0.0090	0.0120
STANDARD DEVIATIONS	0.0016	0.0041	0.0032	0.0023	0.0048	0.0024
GROUP DIFF. @ P=.05		0.0032	0.0026	0.0020	0.0036	0.0021*
GROUP DIFF. @ P=.01		0.0046	0.0037	0.0029	0.0052	0.0030

ANALYSIS OF VARIANCE: F RATIO = 1.63      DF = 5/ 54      F PROBABILITY = 0.167  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR % ORGAN TO BODY WEIGHT RATIO

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STUDY NUMBER: 86005

REPORT FOR FINAL SACRIFICE

STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ORGAN: OVARIES	CONTROLS FROM GROUP(S):		M A L E A N I M A L S		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)	
	2	3	4	5	6	
GROUP	CONTROL	0	0	0	0	
NUMBER/GROUP	0	0	0	0	0	
WEIGHT MEANS	0.0000	0.0000	0.0000	0.0000	0.0000	
STANDARD DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000	
GROUP DIFF. @ P=.05	0.0032	0.0026	0.0020	0.0036	0.0021	
GROUP DIFF. @ P=.01	0.0046	0.0037	0.0029	0.0052	0.0030	

ANALYSIS OF VARIANCE: F RATIO = 0.00 DF = -1/ 0 F PROBABILITY = 0.167  
NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: TESTES	CONTROLS FROM GROUP(S): 1		M A L E A N I M A L S					DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)				
	CONTROL		2		3		4		5		6	
NUMBER/GROUP	10		10		10		10		10		10	
WEIGHT MEANS	0.589		0.614		0.588		0.615		0.571		0.591	
STANDARD DEVIATIONS	0.059		0.118		0.049		0.072		0.047		0.062	
GROUP DIFF. @ P=.05			0.095		0.055		0.066		0.054		0.061	
GROUP DIFF. @ P=.01			0.136		0.079		0.096		0.078		0.088	

ANALYSIS OF VARIANCE: F RATIO = 0.55 DF = 5/ 54 F PROBABILITY = 0.737  
NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

Pathology Table 5 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR % ORGAN TO BODY WEIGHT RATIO  
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STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ORGAN: BRAIN

GROUP	M A L E A N I M A L S				
	CONTROLS FROM GROUP(S): 1		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)		
NUMBER/GROUP	2	5	3	4	5
WEIGHT MEANS	0.501	0.483	0.461	0.523	0.538
STANDARD DEVIATIONS	0.043	0.053	0.051	0.036	0.034
GROUP DIFF. @ P=.05	0.0749	0.0749	0.0749	0.0749	0.0749
GROUP DIFF. @ P=.01	0.0934	0.0934	0.0934	0.0934	0.0934

ANALYSIS OF VARIANCE: F RATIO = 2.07 DF = 5/ 24 F PROBABILITY = 0.103  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: LIVER

GROUP	M A L E A N I M A L S				
	CONTROLS FROM GROUP(S): 1		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)		
NUMBER/GROUP	2	5	3	4	5
WEIGHT MEANS	4.17	4.29	4.10	4.22	4.03
STANDARD DEVIATIONS	0.34	0.27	0.45	0.30	0.21
GROUP DIFF. @ P=.05	0.634	0.634	0.634	0.634	0.634
GROUP DIFF. @ P=.01	0.790	0.790	0.790	0.790	0.790

ANALYSIS OF VARIANCE: F RATIO = 0.91 DF = 5/ 24 F PROBABILITY = 0.493  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR % ORGAN TO BODY WEIGHT RATIO  
STUDY NUMBER: 86005  
REPORT FOR INTERIM SACRIFICE NUMBER 2  
STUDY START DATE: 06-NOV-86

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STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ORGAN: KIDNEY	M A L E A N I M A L S									
	CONTROLS FROM GROUP(S): 1		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)							
GROUP	2	3	4	5	6					
NUMBER/GROUP	5	5	5	5	5					
WEIGHT MEANS	0.721	0.748	0.718	0.694	0.712					0.722
STANDARD DEVIATIONS	0.079	0.048	0.031	0.089	0.043					0.035
GROUP DIFF. @ P=.05		0.102	0.102	0.102	0.102					0.102
GROUP DIFF. @ P=.01		0.128	0.128	0.128	0.128					0.128

ANALYSIS OF VARIANCE: F RATIO = 0.46 DF = 5/ 24 F PROBABILITY = 0.805  
NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: HEART	M A L E A N I M A L S									
	CONTROLS FROM GROUP(S): 1		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)							
GROUP	2	3	4	5	6					
NUMBER/GROUP	5	5	5	5	5					
WEIGHT MEANS	0.350	0.394	0.341	0.273	0.340					0.330
STANDARD DEVIATIONS	0.045	0.088	0.028	0.084	0.042					0.035
GROUP DIFF. @ P=.05		0.102	0.102	0.102	0.102					0.102
GROUP DIFF. @ P=.01		0.128	0.128	0.128	0.128					0.128

ANALYSIS OF VARIANCE: F RATIO = 2.19 DF = 5/ 24 F PROBABILITY = 0.088  
NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

Pathology Table 6 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH      GROUP COMPARISON STATISTICS FOR % ORGAN TO BODY WEIGHT RATIO      PRINTED: 06-FEB-89  
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 SPECIES: RAT/SPRAGUE-DAWLEY      STUDY START DATE: 04-NOV-86      STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ORGAN: SPLEEN	CONTROLS FROM GROUP(S):		M A L E      A N I M A L S												DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)											
	2		3		4		5		6		5		5		5		5		5		5		5		5	
GROUP	CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL	
NUMBER/GROUP	5		5		5		5		5		5		5		5		5		5		5		5		5	
WEIGHT MEANS	0.188		0.194		0.170		0.232		0.187		0.171		0.187		0.171		0.187		0.171		0.187		0.171		0.187	
STANDARD DEVIATIONS	0.018		0.007		0.012		0.115		0.009		0.019		0.009		0.019		0.009		0.019		0.009		0.019		0.009	
GROUP DIFF. @ P=.05	0.024		0.024		0.027		0.144		0.025		0.033		0.025		0.033		0.025		0.033		0.025		0.033		0.025	
GROUP DIFF. @ P=.01	0.039		0.039		0.044		0.237		0.041		0.054		0.041		0.054		0.041		0.054		0.041		0.054		0.041	

ANALYSIS OF VARIANCE: F RATIO = 1.07      DF = 5/ 24      F PROBABILITY = 0.401  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: ADRENAL	CONTROLS FROM GROUP(S):		M A L E      A N I M A L S												DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)											
	2		3		4		5		5		5		5		5		5		5		5		5		5	
GROUP	CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL		CONTROL	
NUMBER/GROUP	5		5		5		5		5		5		5		5		5		5		5		5		5	
WEIGHT MEANS	0.0518		0.0169		0.0123		0.0138		0.0147		0.0127		0.0147		0.0127		0.0147		0.0127		0.0147		0.0127		0.0147	
STANDARD DEVIATIONS	0.0863		0.0012		0.0045		0.0014		0.0034		0.0014		0.0034		0.0014		0.0034		0.0014		0.0034		0.0014		0.0034	
GROUP DIFF. @ P=.05	0.106		0.106		0.107		0.106		0.107		0.106		0.107		0.106		0.107		0.106		0.107		0.106		0.107	
GROUP DIFF. @ P=.01	0.175		0.175		0.176		0.175		0.176		0.175		0.176		0.175		0.176		0.175		0.176		0.175		0.176	

ANALYSIS OF VARIANCE: F RATIO = 0.96      DF = 5/ 24      F PROBABILITY = 0.461  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR % ORGAN TO BODY WEIGHT RATIO  
STUDY NUMBER: 86005  
REPORT FOR INTERIM SACRIFICE NUMBER 2

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STUDY START DATE: 04-NOV-86 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ORGAN: OVARIES	MALE ANIMALS					
	DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)					
GROUP	CONTROLS FROM GROUP(S): 1	2	3	4	5	6
NUMBER/GROUP	0	0	0	0	0	0
WEIGHT MEANS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
STANDARD DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
GROUP DIFF. @ P=.05	0.106	0.106	0.107	0.106	0.107	0.106
GROUP DIFF. @ P=.01	0.175	0.175	0.175	0.175	0.176	0.175

ANALYSIS OF VARIANCE: F RATIO = 0.00 DF = -1/ 0 F PROBABILITY = 0.461  
NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: TESTES	MALE ANIMALS					
	DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)					
GROUP	CONTROLS FROM GROUP(S): 1	2	3	4	5	6
NUMBER/GROUP	5	4	5	5	5	5
WEIGHT MEANS	0.738	0.586	0.741	0.789	0.716	0.805
STANDARD DEVIATIONS	0.060	0.384	0.061	0.073	0.039	0.074
GROUP DIFF. @ P=.05		0.60	0.11	0.12	0.09	0.12
GROUP DIFF. @ P=.01		1.07	0.17	0.19	0.14	0.19

ANALYSIS OF VARIANCE: F RATIO = 1.15 DF = 5/ 23 F PROBABILITY = 0.363  
NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

Pathology Table 6 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR % ORGAN TO BODY WEIGHT RATIO  
 STUDY NUMBER: 2GLP8605  
 REPORT FOR FINAL SACRIFICE  
 STUDY START DATE: 10-DEC-86

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STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ORGAN: BRAIN

FEMALE ANIMALS

CONTROLS FROM GROUP(S): 1 DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)

GROUP	2	3	4	5	6
NUMBER/GROUP	10	10	10	10	10
WEIGHT MEANS	0.557	0.568	0.581	0.570	0.592
STANDARD DEVIATIONS	0.060	0.070	0.048	0.058	0.045
GROUP DIFF. @ P=.05	0.0699	0.0699	0.0699	0.0699	0.0699
GROUP DIFF. @ P=.01	0.0855	0.0855	0.0855	0.0855	0.0855

ANALYSIS OF VARIANCE: F RATIO = 1.20 DF = 5/ 54 F PROBABILITY = 0.320  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: LIVER

FEMALE ANIMALS

CONTROLS FROM GROUP(S): 1 DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)

GROUP	2	3	4	5	6
NUMBER/GROUP	10	10	10	10	10
WEIGHT MEANS	3.62	3.46	3.63	3.52	3.41
STANDARD DEVIATIONS	0.50	0.57	0.40	0.29	0.38
GROUP DIFF. @ P=.05	0.503	0.503	0.503	0.503	0.503
GROUP DIFF. @ P=.01	0.615	0.615	0.615	0.615	0.615

ANALYSIS OF VARIANCE: F RATIO = 0.41 DF = 5/ 54 F PROBABILITY = 0.838  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR % ORGAN TO BODY WEIGHT RATIO

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STUDY NUMBER: 2GLP8605

REPORT FOR FINAL SACRIFICE

STUDY START DATE: 10-DEC-86

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ORGAN: KIDNEY	FEMALE ANIMALS					
	CONTROLS FROM GROUP(S): 1		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)			
	2	3	4	5	6	
NUMBER/GROUP	10	10	10	10	10	
WEIGHT MEANS	0.666	0.628	0.651	0.680	0.645	0.664
STANDARD DEVIATIONS	0.066	0.040	0.078	0.072	0.036	0.079
GROUP DIFF. @ P=.05		0.0761	0.0761	0.0761	0.0761	0.0761
GROUP DIFF. @ P=.01		0.0931	0.0931	0.0931	0.0931	0.0931

ANALYSIS OF VARIANCE: F RATIO = 0.79 DF = 5/ 54 F PROBABILITY = 0.561

NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: HEART	FEMALE ANIMALS					
	CONTROLS FROM GROUP(S): 1		DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)			
	2	3	4	5	6	
NUMBER/GROUP	10	10	10	10	10	
WEIGHT MEANS	0.341	0.323	0.347	0.351	0.332	0.333
STANDARD DEVIATIONS	0.029	0.039	0.041	0.095	0.021	0.019
GROUP DIFF. @ P=.05		0.035	0.036	0.071	0.026	0.025
GROUP DIFF. @ P=.01		0.050	0.052	0.102	0.037	0.036

ANALYSIS OF VARIANCE: F RATIO = 0.48 DF = 5/ 54 F PROBABILITY = 0.791

NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

Pathology Table 7 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR % ORGAN TO BODY WEIGHT RATIO  
 STUDY NUMBER: 26LP8605  
 REPORT FOR FINAL SACRIFICE  
 STUDY START DATE: 10-DEC-86

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

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ORGAN: SPLEEN	CONTROLS FROM GROUP(S):		FEMALE ANIMALS DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)					
	2	3	4	5	6			
GROUP	10	10	10	10	10			
NUMBER/GROUP	10	10	10	10	10			
WEIGHT MEANS	0.175	0.181	0.248	0.196	0.179			
STANDARD DEVIATIONS	0.021	0.027	0.257	0.044	0.026			
GROUP DIFF. @ P=.05		0.025	0.185	0.035	0.024			
GROUP DIFF. @ P=.01		0.036	0.266	0.051	0.035			

ANALYSIS OF VARIANCE: F RATIO = 0.67 DF = 5/ 54 F PROBABILITY = 0.651  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: ADRENAL	CONTROLS FROM GROUP(S):		FEMALE ANIMALS DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)					
	2	3	4	5	6			
GROUP	10	10	10	10	10			
NUMBER/GROUP	10	10	10	10	10			
WEIGHT MEANS	0.0254	0.0259	0.0245	0.0273	0.0261			
STANDARD DEVIATIONS	0.0036	0.0055	0.0078	0.0074	0.0059			
GROUP DIFF. @ P=.05		0.0072	0.0072	0.0072	0.0072			
GROUP DIFF. @ P=.01		0.0088	0.0088	0.0088	0.0088			

ANALYSIS OF VARIANCE: F RATIO = 0.90 DF = 5/ 54 F PROBABILITY = 0.487  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR % ORGAN TO BODY WEIGHT RATIO  
STUDY NUMBER: 2GLP8605  
REPORT FOR FINAL SACRIFICE

PRINTED: 06-FEB-89  
PAGE: 4

STUDY START DATE: 10-DEC-86 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ORGAN: OVARIES	F E M A L E     A N I M A L S											
	CONTROLS FROM GROUP(S): 1			DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)								
NUMBER/GROUP	2		3		4		5		6			
WEIGHT MEANS	10	10	10	10	10	10	10	10	10	10		
STANDARD DEVIATIONS	0.0389	0.0465	0.0439	0.0447	0.0436	0.0460	0.0097	0.0112	0.0112	0.0137		
GROUP DIFF. @ P=.05	0.0093	0.0092	0.0083	0.0081	0.0097	0.0118	0.0097	0.0112	0.0112	0.0112		
GROUP DIFF. @ P=.01		0.0112	0.0112	0.0112	0.0112	0.0112	0.0112	0.0112	0.0112	0.0112		
		0.0137	0.0137	0.0137	0.0137	0.0137	0.0137	0.0137	0.0137	0.0137		

ANALYSIS OF VARIANCE: F RATIO = 0.82    DF = 5/ 54    F PROBABILITY = 0.544

NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

Pathology Table 7 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR % ORGAN TO BODY WEIGHT RATIO  
 STUDY NUMBER: 2GLP8605  
 REPORT FOR INTERIM SACRIFICE NUMBER 2  
 STUDY START DATE: 10-DEC-86

PRINTED: 06-FEB-89  
 PAGE: 1

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ORGAN: BRAIN

CONTROLS FROM GROUP(S): 1		FEMALE ANIMALS DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)					
GROUP	NUMBER/GROUP	2	3	4	5	6	
CONTROL	5						
WEIGHT MEANS		0.674	0.693	0.632	0.666	0.723	
STANDARD DEVIATIONS		0.079	0.069	0.050	0.072	0.118	
GROUP DIFF. @ P=.05		0.134	0.134	0.134	0.134	0.134	
GROUP DIFF. @ P=.01		0.168	0.168	0.168	0.168	0.168	

ANALYSIS OF VARIANCE: F RATIO = 0.81 DF = 5/ 24 F PROBABILITY = 0.557  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: LIVER

CONTROLS FROM GROUP(S): 1		FEMALE ANIMALS DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)					
GROUP	NUMBER/GROUP	2	3	4	5	6	
CONTROL	5						
WEIGHT MEANS		3.70	4.13	3.70	3.57	3.57	
STANDARD DEVIATIONS		0.20	0.26	0.45	0.19	0.14	
GROUP DIFF. @ P=.05		0.526	0.526	0.526	0.526	0.526	
GROUP DIFF. @ P=.01		0.656	0.656	0.656	0.656	0.656	

ANALYSIS OF VARIANCE: F RATIO = 2.50 DF = 5/ 24 F PROBABILITY = 0.058  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH      GROUP COMPARISON STATISTICS FOR % ORGAN TO BODY WEIGHT RATIO      PRINTED: 06-FEB-89  
 DIV OF RES SUPP, PATH SERV GP      STUDY NUMBER: 2GLP8605      PAGE: 2  
 PRESIDIO OF SAN FRANCISCO, CA 94129      REPORT FOR INTERIM SACRIFICE NUMBER 2  
 SPECIES: RAT/SPRAGUE-DAWLEY      STUDY START DATE: 10-DEC-86      STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ORGAN: KIDNEY	F E M A L E      A N I M A L S									
	CONTROLS FROM GROUP(S): 1		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)							
GROUP	2	3	4	5	5	5	5	5	5	6
NUMBER/GROUP	5	5	5	5	5	5	5	5	5	5
WEIGHT MEANS	0.739	0.690	0.719	0.693	0.672	0.672	0.672	0.672	0.672	0.733
STANDARD DEVIATIONS	0.058	0.058	0.057	0.035	0.029	0.029	0.029	0.029	0.029	0.077
GROUP DIFF. @ P=.05		0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096
GROUP DIFF. @ P=.01		0.119	0.119	0.119	0.119	0.119	0.119	0.119	0.119	0.119

ANALYSIS OF VARIANCE: F RATIO = 1.20      DF = 5/ 24      F PROBABILITY = 0.339  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: HEART	F E M A L E      A N I M A L S									
	CONTROLS FROM GROUP(S): 1		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)							
GROUP	2	3	4	5	5	5	5	5	5	6
NUMBER/GROUP	5	5	5	5	5	5	5	5	5	5
WEIGHT MEANS	0.364	0.345	0.339	0.346	0.368	0.368	0.368	0.368	0.368	0.387
STANDARD DEVIATIONS	0.050	0.037	0.051	0.019	0.046	0.046	0.046	0.046	0.046	0.061
GROUP DIFF. @ P=.05		0.0801	0.0801	0.0801	0.0801	0.0801	0.0801	0.0801	0.0801	0.0801
GROUP DIFF. @ P=.01		0.0999	0.0999	0.0999	0.0999	0.0999	0.0999	0.0999	0.0999	0.0999

ANALYSIS OF VARIANCE: F RATIO = 0.80      DF = 5/ 24      F PROBABILITY = 0.565  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

Pathology Table 8 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR % ORGAN TO BODY WEIGHT RATIO  
 STUDY NUMBER: 20LP8605  
 REPORT FOR INTERIM SACRIFICE NUMBER 2  
 STUDY START DATE: 10-DEC-86

PRINTED: 06-FEB-89  
 PAGE: 3

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ORGAN: SPLEEN	F E M A L E A N I M A L S					
	CONTROLS FROM GROUP(S): 1		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)			
GROUP	2	3	4	5	6	
NUMBER/GROUP	5	5	5	5	5	
WEIGHT MEANS	0.232	0.215	0.228	0.199	0.204	0.275
STANDARD DEVIATIONS	0.018	0.036	0.015	0.021	0.038	0.033
GROUP DIFF. @ P=.05		0.0496	0.0496	0.0496	0.0496	0.0496
GROUP DIFF. @ P=.01		0.0619	0.0619	0.0619	0.0619	0.0619

ANALYSIS OF VARIANCE: F RATIO = 4.72 DF = 5/ 24 F PROBABILITY = 0.004  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: ADRENAL	F E M A L E A N I M A L S					
	CONTROLS FROM GROUP(S): 1		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)			
GROUP	2	3	4	5	6	
NUMBER/GROUP	5	5	5	5	5	
WEIGHT MEANS	0.0358	0.0276	0.0279	0.0295	0.0288	0.0301
STANDARD DEVIATIONS	0.0074	0.0053	0.0057	0.0095	0.0055	0.0064
GROUP DIFF. @ P=.05		0.0119	0.0119	0.0119	0.0119	0.0119
GROUP DIFF. @ P=.01		0.0148	0.0148	0.0148	0.0148	0.0148

ANALYSIS OF VARIANCE: F RATIO = 0.99 DF = 5/ 24 F PROBABILITY = 0.446  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR % ORGAN TO BODY WEIGHT RATIO  
STUDY NUMBER: 2GLP8605

PRINTED: 06-FEB-89  
PAGE: 4

REPORT FOR INTERIM SACRIFICE NUMBER 2

STUDY START DATE: 10-DEC-86 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ORGAN: OVARIES	FEMALE ANIMALS		DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)	
	CONTROLS FROM GROUP(S):	1	2	3
NUMBER/GROUP	5	5	5	5
WEIGHT MEANS	0.0635	0.0694	0.0581	0.0587
STANDARD DEVIATIONS	0.0069	0.0291	0.0129	0.0107
GROUP DIFF. @ P=.05		0.0370	0.0180	0.0158
GROUP DIFF. @ P=.01		0.0609	0.0297	0.0260
				0.0193
				0.0525
				0.0065
				0.0117
				0.0146
				0.0241

ANALYSIS OF VARIANCE: F RATIO = 0.75 DF = 5/ 24 F PROBABILITY = 0.593  
NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

Pathology Table 8 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH      GROUP COMPARISON STATISTICS FOR % ORGAN TO BRAIN WEIGHT RATIO      PRINTED: 02-FEB-89  
 DIV OF RES SUPP, PATH SERV GP      STUDY NUMBER: 86005      PAGE: 1  
 PRESIDIO OF SAN FRANCISCO, CA 94129      REPORT FOR FINAL SACRIFICE  
 SPECIES: RAT/SPRAGUE-DAWLEY      STUDY START DATE: 04-NOV-86      STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ORGAN: BRAIN	M A L E    A N I M A L S					
	CONTROLS FROM GROUP(S): 1    DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)					
GROUP	2	3	4	5	6	
NUMBER/GROUP	10	10	10	10	10	
WEIGHT MEANS	100.00	100.00	100.00	100.00	100.00	
STANDARD DEVIATIONS	0.00	0.00	0.00	0.00	0.00	
GROUP DIFF. @ P=.05	0.0402	0.0402	0.0402	0.0402	0.0402	
GROUP DIFF. @ P=.01	0.0491	0.0491	0.0491	0.0491	0.0491	

ANALYSIS OF VARIANCE: F RATIO = 0.00    DF = 5/ 54    F PROBABILITY = 1.000  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: LIVER	M A L E    A N I M A L S					
	CONTROLS FROM GROUP(S): 1    DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)					
GROUP	2	3	4	5	6	
NUMBER/GROUP	10	10	10	10	10	
WEIGHT MEANS	1164.55	950.45	914.50	892.53	893.73	
STANDARD DEVIATIONS	814.94	151.66	182.76	142.88	100.96	
GROUP DIFF. @ P=.05	591.83	141.83	159.59	137.05	116.27	
GROUP DIFF. @ P=.01	851.18	203.98	229.53	197.11	167.22	

ANALYSIS OF VARIANCE: F RATIO = 0.83    DF = 5/ 54    F PROBABILITY = 0.533  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR % ORGAN TO BRAIN WEIGHT RATIO

STUDY NUMBER: 86005

REPORT FOR FINAL SACRIFICE

STUDY START DATE: 04-NOV-86

PRINTED: 02-FEB-89

PAGE: 2

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ORGAN: KIDNEY	CONTROLS FROM GROUP(S):		MALE ANIMALS					
	2	3	4	5	6	DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)		
GROUP	10	10	10	10	10			
NUMBER/GROUP	10	10	10	10	10			
WEIGHT MEANS	159.42	162.00	165.98	153.21	163.32			
STANDARD DEVIATIONS	19.10	17.39	25.95	24.77	19.11			
GROUP DIFF. @ P=.05		24.86	24.86	24.86	24.86			
GROUP DIFF. @ P=.01		30.41	30.41	30.41	30.41			

ANALYSIS OF VARIANCE: F RATIO = 0.43 DF = 5/ 54 F PROBABILITY = 0.827  
NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: HEART	CONTROLS FROM GROUP(S):		MALE ANIMALS					
	2	3	4	5	6	DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)		
GROUP	10	10	10	10	10			
NUMBER/GROUP	10	10	10	10	10			
WEIGHT MEANS	77.87	73.44	78.90	73.52	72.35			
STANDARD DEVIATIONS	6.54	5.20	7.59	12.72	6.81			
GROUP DIFF. @ P=.05		9.32	9.32	9.32	9.32			
GROUP DIFF. @ P=.01		11.40	11.40	11.40	11.40			

ANALYSIS OF VARIANCE: F RATIO = 1.13 DF = 5/ 54 F PROBABILITY = 0.355  
NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH      GROUP COMPARISON STATISTICS FOR % ORGAN TO BRAIN WEIGHT RATIO      PRINTED: 02-FEB-89  
 DIV OF RES SUPP, PATH SERV GP      STUDY NUMBER: 86005      PAGE: 3  
 PRESIDIO OF SAN FRANCISCO, CA 94129      REPORT FOR FINAL SACRIFICE  
 SPECIES: RAT/SPRAGUE-DAWLEY      STUDY START DATE: 04-NOV-86      STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ORGAN: SPLEEN	M A L E      A N I M A L S					
	CONTROLS FROM GROUP(S):		DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)			
	2	3	4	5	6	
GROUP	10	10	10	10	10	
NUMBER/GROUP	10	10	10	10	10	
WEIGHT MEANS	35.78	38.06	38.14	36.84	38.00	38.10
STANDARD DEVIATIONS	5.15	50.30	7.83	9.57	5.94	5.27
GROUP DIFF. @ P=.05		36.28	6.73	7.80	5.64	5.29
GROUP DIFF. @ P=.01		52.18	9.68	11.22	8.12	7.60

ANALYSIS OF VARIANCE: F RATIO = 0.91      DF = 5/ 54      F PROBABILITY = 0.485  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: ADRENAL	M A L E      A N I M A L S					
	CONTROLS FROM GROUP(S):		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)			
	2	3	4	5	6	
GROUP	10	10	10	10	10	
NUMBER/GROUP	10	10	10	10	10	
WEIGHT MEANS	2.47	2.70	3.06	2.33	2.46	3.35
STANDARD DEVIATIONS	0.43	0.83	1.00	0.80	1.23	0.93
GROUP DIFF. @ P=.05		1.07	1.07	1.07	1.07	1.07
GROUP DIFF. @ P=.01		1.31	1.31	1.31	1.31	1.31

ANALYSIS OF VARIANCE: F RATIO = 1.94      DF = 5/ 54      F PROBABILITY = 0.101  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR % ORGAN TO BRAIN WEIGHT RATIO  
STUDY NUMBER: 86005  
REPORT FOR FINAL SACRIFICE

PRINTED: 02-FEB-89  
PAGE: 4

STUDY START DATE: 04-NOV-86 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ORGAN: TESTES	M A L E A N I M A L S											
	CONTROLS FROM GROUP(S): 1			DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)								
NUMBER/GROUP	2	3	4	5	6							
WEIGHT MEANS	10	10	10	10	10	10	10	10	10	10	10	10
STANDARD DEVIATIONS	160.95	154.82	162.81	161.20	155.91	161.80	13.57	13.57	13.57	13.57	13.57	13.57
GROUP DIFF. @ P=.05	15.28	26.86	13.78	30.06	14.66	12.98	14.66	14.66	14.66	14.66	14.66	14.66
GROUP DIFF. @ P=.01		22.17	14.77	24.19	21.09	18.67						
		31.89	21.24	34.80								

ANALYSIS OF VARIANCE: F RATIO = 0.29 OF = 5/ 54 F PROBABILITY = 0.916  
NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR % ORGAN TO BRAIN WEIGHT RATIO  
 STUDY NUMBER: 86005  
 REPORT FOR INTERIM SACRIFICE NUMBER 2  
 STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

PRINTED: 06-FEB-89  
 PAGE: 1

## M A L E A N I M A L S

## CONTROLS FROM GROUP(S): 1 DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)

ORGAN: BRAIN	GROUP	NUMBER/GROUP	WEIGHT MEANS	STANDARD DEVIATIONS	GROUP DIFF. @ P=.05	GROUP DIFF. @ P=.01
CONTROL	5	100.00	0.00	0.00	0.0000*	0.0000*
	5	100.00	0.00	0.00	0.0000*	0.0000*
	5	100.00	0.00	0.00	0.0000*	0.0000*
	5	100.00	0.00	0.00	0.0000*	0.0000*
	5	100.00	0.00	0.00	0.0000*	0.0000*

ANALYSIS OF VARIANCE: F RATIO = 0.00 DF = 5/ 24 F PROBABILITY = 1.000  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

## M A L E A N I M A L S

## CONTROLS FROM GROUP(S): 1 DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)

ORGAN: LIVER	GROUP	NUMBER/GROUP	WEIGHT MEANS	STANDARD DEVIATIONS	GROUP DIFF. @ P=.05	GROUP DIFF. @ P=.01
CONTROL	5	908.97	153.03	835.18	84.37	185.33
	5	908.97	153.03	835.18	84.37	185.33
	5	908.97	153.03	835.18	84.37	185.33
	5	908.97	153.03	835.18	84.37	185.33
	5	908.97	153.03	835.18	84.37	185.33

ANALYSIS OF VARIANCE: F RATIO = 1.71 DF = 5/ 24 F PROBABILITY = 0.170  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR % ORGAN TO BRAIN WEIGHT RATIO

STUDY NUMBER: 86005

REPORT FOR INTERIM SACRIFICE NUMBER 2

STUDY START DATE: 04-NOV-86

PRINTED: 06-FEB-89  
PAGE: 2

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ORGAN: KIDNEY	M A L E A N I M A L S									
	CONTROLS FROM GROUP(S): 1					DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)				
GROUP	CONTROL									
NUMBER/GROUP	5					3 5 4 5 5				
WEIGHT MEANS	145.33					150.13 150.16 150.65 136.88 134.65				
STANDARD DEVIATIONS	10.80					15.29 15.78 11.21 14.73 10.28				
GROUP DIFF. @ P=.05						23.09 23.09 23.09 23.09 23.09				
GROUP DIFF. @ P=.01	28.79					28.79 28.79 28.79 28.79 28.79				

ANALYSIS OF VARIANCE: F RATIO = 1.47 DF = 5/ 24 F PROBABILITY = 0.235

NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: HEART	M A L E A N I M A L S									
	CONTROLS FROM GROUP(S): 1					DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)				
GROUP	CONTROL									
NUMBER/GROUP	5					3 5 4 5 5				
WEIGHT MEANS	71.14					78.41 70.82 60.17 65.37 61.61				
STANDARD DEVIATIONS	12.24					14.46 3.40 20.64 10.42 8.33				
GROUP DIFF. @ P=.05						22.27 22.27 22.27 22.27 22.27				
GROUP DIFF. @ P=.01	27.77					27.77 27.77 27.77 27.77 27.77				

ANALYSIS OF VARIANCE: F RATIO = 1.45 DF = 5/ 24 F PROBABILITY = 0.243

NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

Pathology Table 10 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR % ORGAN TO BRAIN WEIGHT RATIO  
 STUDY NUMBER: 86005  
 REPORT FOR INTERIM SACRIFICE NUMBER 2  
 STUDY START DATE: 04-NOV-86  
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ORGAN: SPLEEN	M A L E A N I M A L S									
	CONTROLS FROM GROUP(S): 1		DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)							
	GROUP	2	3	4	5	5	5	5	6	5
NUMBER/GROUP		5	5	5	5	5	5	5	5	5
WEIGHT MEANS		38.03	35.77	50.42	35.84	31.74				
STANDARD DEVIATIONS		4.65	5.48	24.08	2.78	3.03				
GROUP DIFF. @ P=.05			6.88	8.88	6.69	6.86				
GROUP DIFF. @ P=.01			11.34	14.63	11.02	11.29				

ANALYSIS OF VARIANCE: F RATIO = 1.85 DF = 5/ 24 F PROBABILITY = 0.141  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: ADRENAL	M A L E A N I M A L S									
	CONTROLS FROM GROUP(S): 1		DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)							
	GROUP	2	3	4	5	5	5	5	6	5
NUMBER/GROUP		5	5	5	5	5	5	5	5	5
WEIGHT MEANS		9.92	3.37	2.60	3.03	2.82				
STANDARD DEVIATIONS		16.12	0.13	1.03	0.46	0.68				
GROUP DIFF. @ P=.05			19.89	19.93	19.90	19.91				
GROUP DIFF. @ P=.01			32.77	32.83	32.78	32.80				

ANALYSIS OF VARIANCE: F RATIO = 0.97 DF = 5/ 24 F PROBABILITY = 0.456  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR % ORGAN TO BRAIN WEIGHT RATIO

STUDY NUMBER: 86005

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REPORT FOR INTERIM SACRIFICE NUMBER 2

STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ORGAN: OVARIES	CONTROLS FROM GROUP(S):		M A L E A N I M A L S		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)	
	2	0	3	4	5	6
NUMBER/GROUP	0	0	0	0	0	0
WEIGHT MEANS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
STANDARD DEVIATIONS	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
GROUP DIFF. @ P=.05	19.89	19.89	19.93	19.90	19.91	19.90
GROUP DIFF. @ P=.01	32.77	32.77	32.83	32.78	32.80	32.77

ANALYSIS OF VARIANCE: F RATIO = 0.00 DF = -1/ 0 F PROBABILITY = 0.456

NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: TESTES	CONTROLS FROM GROUP(S):		M A L E A N I M A L S		DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)	
	2	4	3	4	5	6
NUMBER/GROUP	5	5	5	5	5	5
WEIGHT MEANS	149.25	113.23	154.17	172.04	137.05	149.93
STANDARD DEVIATIONS	13.90	74.49	10.43	15.09	2.77	14.53
GROUP DIFF. @ P=.05	117.08	117.08	21.45	25.32	17.50	24.82
GROUP DIFF. @ P=.01	208.35	208.35	35.34	41.71	28.82	40.88

ANALYSIS OF VARIANCE: F RATIO = 1.99 DF = 5/ 23 F PROBABILITY = 0.117

NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

Pathology Table 10 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR % ORGAN TO BRAIN WEIGHT RATIO  
 STUDY NUMBER: 2GLP8605  
 REPORT FOR FINAL SACRIFICE  
 STUDY START DATE: 10-DEC-86

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

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ORGAN: BRAIN

FEMALE ANIMALS

CONTROLS FROM GROUP(S): 1 DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)

GROUP	2	3	4	5	6
NUMBER/GROUP	10	10	10	10	10
WEIGHT MEANS	100.00	100.00	100.00	100.00	100.00
STANDARD DEVIATIONS	0.00	0.00	0.00	0.00	0.00
GROUP DIFF. @ P=.05	0.0000*	0.0000*	0.0000*	0.0000*	0.0000*
GROUP DIFF. @ P=.01	0.0000*	0.0000*	0.0000*	0.0000*	0.0000*

ANALYSIS OF VARIANCE: F RATIO = 0.00 DF = 5/ 54 F PROBABILITY = 1.000  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: LIVER

FEMALE ANIMALS

CONTROLS FROM GROUP(S): 1 DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)

GROUP	2	3	4	5	6
NUMBER/GROUP	10	10	10	10	10
WEIGHT MEANS	598.54	621.12	626.43	625.50	581.66
STANDARD DEVIATIONS	128.31	145.67	53.19	100.99	91.37
GROUP DIFF. @ P=.05	126.61	126.61	126.61	126.61	126.61
GROUP DIFF. @ P=.01	154.88	154.88	154.88	154.88	154.88

ANALYSIS OF VARIANCE: F RATIO = 0.37 DF = 5/ 54 F PROBABILITY = 0.869  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARM; INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR % ORGAN TO BRAIN WEIGHT RATIO  
 STUDY NUMBER: 2GLP8605  
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STUDY START DATE: 10-DEC-86  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ORGAN: KIDNEY	CONTROLS FROM GROUP(S): 1		FEMALE ANIMALS		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)	
	GROUP	NUMBER/GROUP	WEIGHT MEANS	STANDARD DEVIATIONS	GROUP DIFF. @ P=.05	GROUP DIFF. @ P=.01
	CONTROL	10	109.72	16.80		
	2	10	113.98	116.43	117.16	114.32
	3	10	13.53	21.30	9.31	15.03
	4	10	18.35	18.35	18.35	18.35
	5	10	22.45	22.45	22.45	22.45
	6	10				112.79
	10					14.75
						18.35
						22.45

ANALYSIS OF VARIANCE: F RATIO = 0.30 DF = 5/ 54 F PROBABILITY = 0.913  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: HEART	CONTROLS FROM GROUP(S): 1		FEMALE ANIMALS		DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)	
	GROUP	NUMBER/GROUP	WEIGHT MEANS	STANDARD DEVIATIONS	GROUP DIFF. @ P=.05	GROUP DIFF. @ P=.01
	CONTROL	10	56.14	7.66		
	2	10	58.18	5.53	61.09	58.50
	3	10	62.26	12.09	18.78	4.55
	4	10	6.78	10.27	14.55	6.39
	5	10	9.75	14.78	20.93	9.19
	6	10				56.61
	10					4.57
						6.40
						9.20

ANALYSIS OF VARIANCE: F RATIO = 0.56 DF = 5/ 54 F PROBABILITY = 0.730  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

Pathology Table 11 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR % ORGAN TO BRAIN WEIGHT RATIO  
 STUDY NUMBER: 2GLP8605  
 REPORT FOR FINAL SACRIFICE  
 STUDY START DATE: 10-DEC-86

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STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ORGAN: SPLEEN	F E M A L E A N I M A L S					
	CONTROLS FROM GROUP(S): 1			DATA NON-HOMOGENEOUS BY BARTLETT'S TEST (MODIFIED t TEST)		
GROUP	2	3	4	5	6	
NUMBER/GROUP	10	10	10	10	10	
WEIGHT MEANS	32.63	45.61	34.08	31.63	30.09	
STANDARD DEVIATIONS	5.23	50.98	9.17	5.41	4.07	
GROUP DIFF. @ P=.05	4.96	36.73	7.34	5.06	4.37	
GROUP DIFF. @ P=.01	7.14	52.82	10.55	7.28	6.28	

ANALYSIS OF VARIANCE: F RATIO = 0.80 DF = 5/ 54 F PROBABILITY = 0.557  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: ADRENAL	F E M A L E A N I M A L S					
	CONTROLS FROM GROUP(S): 1			DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)		
GROUP	2	3	4	5	6	
NUMBER/GROUP	10	10	10	10	10	
WEIGHT MEANS	4.67	4.44	4.72	4.66	5.03	
STANDARD DEVIATIONS	1.01	1.71	1.34	1.44	0.80	
GROUP DIFF. @ P=.05	1.45	1.45	1.45	1.45	1.45	
GROUP DIFF. @ P=.01	1.77	1.77	1.77	1.77	1.77	

ANALYSIS OF VARIANCE: F RATIO = 0.54 DF = 5/ 54 F PROBABILITY = 0.748  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH      GROUP COMPARISON STATISTICS FOR % ORGAN TO BRAIN WEIGHT RATIO      PRINTED: 02-FEB-89  
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 PRESIDIO OF SAN FRANCISCO, CA 94129      REPORT FOR FINAL SACRIFICE  
 SPECIES: RAT/SPRAGUE-DAWLEY      STUDY START DATE: 10-DEC-86      STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ORGAN: OVARIES	F E M A L E      A N I M A L S					
	CONTROLS FROM GROUP(S): 1		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)			
	CONTROL	2	3	4	5	6
NUMBER/GROUP	10	10	10	10	10	10
WEIGHT MEANS	6.28	8.41	7.89	7.72	7.78	7.77
STANDARD DEVIATIONS	0.97	1.78	2.00	1.35	2.12	1.93
GROUP DIFF. @ P=.05		2.05*	2.05	2.05	2.05	2.05
GROUP DIFF. @ P=.01		2.51	2.51	2.51	2.51	2.51

ANALYSIS OF VARIANCE: F RATIO = 1.69      DF = 5/ 54      F PROBABILITY = 0.152  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH      GROUP COMPARISON STATISTICS FOR % ORGAN TO BRAIN WEIGHT RATIO      PRINTED: 02-FEB-89  
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 PRESIDIO OF SAN FRANCISCO, CA 94129      REPORT FOR INTERIM SACRIFICE NUMBER 2  
 SPECIES: RAT/SPRAGUE-DAWLEY      STUDY START DATE: 10-DEC-86      STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ORGAN: BRAIN	F E M A L E      A N I M A L S									
	CONTROLS FROM GROUP(S): 1		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)							
GROUP	2	3	4	5	6					
NUMBER/GROUP	5	5	5	5	5					
WEIGHT MEANS	100.00	100.00	100.00	100.00	100.00					
STANDARD DEVIATIONS	0.00	0.03	0.00	0.00	0.00					
GROUP DIFF. @ P=.05	0.0631	0.0631	0.0631	0.0631	0.0631					
GROUP DIFF. @ P=.01	0.0786	0.0786	0.0786	0.0786	0.0786					

ANALYSIS OF VARIANCE: F RATIO = 0.00      DF = 5/ 24      F PROBABILITY = 1.000  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: LIVER	F E M A L E      A N I M A L S									
	CONTROLS FROM GROUP(S): 1		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)							
GROUP	2	3	4	5	6					
NUMBER/GROUP	5	5	5	5	5					
WEIGHT MEANS	577.21	534.65	603.05	592.84	542.72					
STANDARD DEVIATIONS	88.87	81.60	84.88	124.31	87.84					
GROUP DIFF. @ P=.05		160.42	160.42	160.42	160.42					
GROUP DIFF. @ P=.01		200.00	200.00	200.00	200.00					

ANALYSIS OF VARIANCE: F RATIO = 0.89      DF = 5/ 24      F PROBABILITY = 0.508  
 NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR % ORGAN TO BRAIN WEIGHT RATIO

STUDY NUMBER: 2GLP8605

REPORT FOR INTERIM SACRIFICE NUMBER 2

STUDY START DATE: 10-DEC-86

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STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ORGAN: KIDNEY	F E M A L E      A N I M A L S									
	CONTROLS FROM GROUP(S): 1					DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)				
GROUP	2	3	4	5	6					
NUMBER/GROUP	5	5	5	5	5					
WEIGHT MEANS	110.90	99.11	104.35	110.38	101.64					
STANDARD DEVIATIONS	14.70	4.24	10.95	14.29	9.94					
GROUP DIFF. @ P=.05		19.88	19.88	19.88	19.88					
GROUP DIFF. @ P=.01		24.79	24.79	24.79	24.79					

ANALYSIS OF VARIANCE: F RATIO = 0.90    DF = 5/ 24    F PROBABILITY = 0.496  
NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: HEART	F E M A L E      A N I M A L S									
	CONTROLS FROM GROUP(S): 1					DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)				
GROUP	2	3	4	5	6					
NUMBER/GROUP	5	5	5	5	5					
WEIGHT MEANS	54.05	49.78	49.71	54.98	55.75					
STANDARD DEVIATIONS	3.76	6.90	11.16	5.01	8.85					
GROUP DIFF. @ P=.05		14.34	14.34	14.34	14.34					
GROUP DIFF. @ P=.01		17.87	17.87	17.87	17.87					

ANALYSIS OF VARIANCE: F RATIO = 0.53    DF = 5/ 24    F PROBABILITY = 0.755  
NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

Pathology Table 12 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR % ORGAN TO BRAIN WEIGHT RATIO  
STUDY NUMBER: 26LP8605

REPORT FOR INTERIM SACRIFICE NUMBER 2

STUDY START DATE: 10-DEC-86 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

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ORGAN: SPLEEN FEMALE ANIMALS  
CONTROLS FROM GROUP(S): 1 DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)

GROUP	2	3	4	5	6
NUMBER/GROUP	5	5	5	5	5
WEIGHT MEANS	34.71	33.19	31.64	30.83	38.54
STANDARD DEVIATIONS	4.15	4.78	3.89	5.88	5.34
GROUP DIFF. @ P=.05		8.40	8.40	8.40	8.40
GROUP DIFF. @ P=.01		10.47	10.47	10.47	10.47

ANALYSIS OF VARIANCE: F RATIO = 1.91 DF = 5/ 24 F PROBABILITY = 0.129  
NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

ORGAN: ADRENAL FEMALE ANIMALS  
CONTROLS FROM GROUP(S): 1 DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)

GROUP	2	3	4	5	6
NUMBER/GROUP	5	5	5	5	5
WEIGHT MEANS	5.36	4.03	4.75	4.40	4.15
STANDARD DEVIATIONS	1.14	0.76	1.80	1.21	0.44
GROUP DIFF. @ P=.05		1.94	1.94	1.94	1.94
GROUP DIFF. @ P=.01		2.41	2.41	2.41	2.41

ANALYSIS OF VARIANCE: F RATIO = 1.15 DF = 5/ 24 F PROBABILITY = 0.361  
NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY

GROUP COMPARISON STATISTICS FOR % ORGAN TO BRAIN WEIGHT RATIO

STUDY NUMBER: 2GLP8605

REPORT FOR INTERIM SACRIFICE NUMBER 2

STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89  
PAGE: 4

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ORGAN: OVARIES	CONTROLS FROM GROUP(S):		F E M A L E		A N I M A L S		DATA HOMOGENEOUS BY BARTLETT'S TEST (DUNNETT'S t TEST)	
	2	5	2	5	3	5	4	5
NUMBER/GROUP	5	5	5	5	5	5	5	5
WEIGHT MEANS	9.59	9.75	8.50	9.29	7.91	8.74	8.74	8.74
STANDARD DEVIATIONS	1.93	3.42	2.35	1.59	0.88	1.33	1.33	1.33
GROUP DIFF. @ P=.05		3.64	3.64	3.64	3.64	3.64	3.64	3.64
GROUP DIFF. @ P=.01		4.54	4.54	4.54	4.54	4.54	4.54	4.54

ANALYSIS OF VARIANCE: F RATIO = 0.57 DF = 5/ 24 F PROBABILITY = 0.720  
NOTE: A \* INDICATES GROUP MEAN IS SIGNIFICANTLY DIFFERENT FROM CONTROL AT LEVEL OF SIGNIFICANCE SHOWN.

Pathology Table 12 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

INCIDENCE SUMMARY REPORT FOR GROSS NECROPSY OBSERVATIONS  
 STUDY NUMBER: 86005  
 REPORT FOR FINAL SACRIFICE  
 STUDY START DATE: 04-NOV-86

PRINTED: 08-DEC-88  
 PAGE: 1

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

NOTE: CTLs = CONTROLS    ANIMAL SEX:  
 FROM GROUP(S): 1    GROUP:  
                                  NO. IN GROUP:

	CTLs	2	3	4	5	6
WHOLE BODY						
NO GROSS LESIONS RECOGNIZED.	9	8	10	10	9	9
TOTAL:	9	8	10	10	9	9
LIVER						
ABNORMAL COLOR	1	0	0	0	0	0
ENLARGED	0	1	0	0	0	0
DISSEMINATED FOCI	0	1	0	0	0	0
TOTAL:	1	2	0	0	0	0
LYMPH NODES						
HEMORRHAGE(S)	0	1	0	0	0	0
ENLARGED	0	0	0	0	1	0
TOTAL:	0	1	0	0	1	0
SPLEEN						
ENLARGED (SPLENOHEGALY)	0	1	0	0	0	0
TOTAL:	0	1	0	0	0	0
TESTES						
ATROPHIC / SMALL, UNILATERALLY	0	1	0	0	0	0
TOTAL:	0	1	0	0	0	0

# Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY

INCIDENCE SUMMARY REPORT FOR GROSS NECROPSY OBSERVATIONS  
STUDY NUMBER: 86005  
REPORT FOR INTERIM SACRIFICE NUMBER 2  
STUDY START DATE: 04-NOV-86

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STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

NOTE: CTLS = CONTROLS      ANIMAL SEX:  
FROM GROUP(S): 1      GROUP:  
NO. IN GROUP:

MALES

CTLS	2	3	4	5	6
5	5	5	5	5	5

WHOLE BODY

NO GROSS LESIONS RECOGNIZED.  
TOTAL:

5	5	5	5	5	5
5	5	5	5	5	5

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

INCIDENCE SUMMARY REPORT FOR GROSS NECROPSY OBSERVATIONS  
 STUDY NUMBER: 2GLP8605  
 REPORT FOR FINAL SACRIFICE  
 STUDY START DATE: 10-DEC-86

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

NOTE: CTLS = CONTROLS      ANIMAL SEX:  
 FROM GROUP(S): 1      GROUP:  
                                  NO. IN GROUP:

	CTLS	2	3	4	5	6
WHOLE BODY	10	10	10	10	10	10
NO GROSS LESIONS RECOGNIZED	9	9	9	9	10	9
TOTAL:	9	9	9	9	10	9
ADRENAL						
GROWTH(S) / MASS(ES)	0	1	0	0	0	0
TOTAL:	0	1	0	0	0	0
LIVER						
ABNORMAL COLOR	1	0	0	0	0	0
TOTAL:	1	0	0	0	0	0
SKIN						
ALOPECIA	0	0	0	0	0	1
TOTAL:	0	0	0	0	0	1
SPLEEN						
ENLARGED (SPLENOMEGALY)	0	0	1	0	0	0
FIBROUS ADHESION(S)	0	0	1	0	0	0
TOTAL:	0	0	2	0	0	0

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

INCIDENCE SUMMARY REPORT FOR GROSS NECROPSY OBSERVATIONS  
 STUDY NUMBER: 2GLP8605  
 REPORT FOR INTERIM SACRIFICE NUMBER 2  
 STUDY START DATE: 10-DEC-86

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 PAGE: 1

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

NOTE: CTLS = CONTROLS      ANIMAL SEX:  
 FROM GROUP(S): 1      GROUP:  
                                  NO. IN GROUP:

CTLS	2	3	4	5	6
5	5	5	5	5	5

WHOLE BODY

NO GROSS LESIONS RECOGNIZED.

TOTAL: 5 4 5 5 5 4

5 4 5 5 5 4

OVARIES

PARA-OVARIAN CYST(S)

TOTAL: 0 1 0 0 0 0

0 1 0 0 0 0

SKIN

ALOPECIA

TOTAL: 0 0 0 0 0 1

0 0 0 0 0 1

PRINTED: 02-FEB-89  
PAGE: 1

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

NOTES: ANIMALS = ALL DEAD FROM 01-FEB-87 TO 06-FEB-87  
 CILS = CONTROLS FROM GROUP(S): 1

T I S S U E S	W I T H	F I N D I N G S	N O . I N	G R O U P	D O S A G E	A N I M A L	S E X :

ANIMALS AFFECTED --	
CTLS	-- MALES --
2	3
10	10
5	10
6	10

10 10 10 10 10 10

	NUMBER EXAMINED:
ACCESSORY SEX OR .....	10    0    0    0    0    0    10
-INFLAMMATION,CHRONIC,PROSTATE	4    0    0    0    0    0
	40%    0%    0%    0%    0%    40%

[illegible][illegible][illegible]

ADRENAL .....	NUMBER EXAMINED:	10	0	0	0	0	10
---------------	------------------	----	---	---	---	---	----

AORTA .....		NUMBER EXAMINED:
10	0	0
10	0	0

BONE, FEMUR	NUMBER EXAMINED:
10	0
0	0
0	0
10	0

8BRAIN .....	NUMBER EXAMINED:
10	0
0	0
0	0
10	0

BONE, STERNUM .....	NUMBER EXAMINED:
10	0
0	0
0	0
9	

CECUM .....	NUMBER EXAMINED:
10	0
0	0
0	0
10	0

COLON .....	NUMBER EXAMINED:	10	0	0	0	0	10
-------------	------------------	----	---	---	---	---	----

[illegible]

INFLAMMATION, SUBACUTE	0%	0%	0%	10%	0%	10%

-INFLAMMATION, ACUTE

[illegible]

INFLAMMATION, CHRONIC	%	%	%	%	%	%	%
	0%	0%	0%	0%	0%	0%	0%

-DEGENERATION, FOCAL

Pathology Table 17

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH INCIDENCE SUMMARY (WITH %) OF MICROSCOPIC OBSERVATIONS(ALL FINDING) PRINTED: 02-FEB-89  
 DIV OF RES SUPP, PATH SERV GP STUDY NUMBER: 86005 PAGE: 2  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 PATHOLOGIST(S): WALKER, HARRY  
 STUDY START DATE: 04-NOV-86  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

NOTES: ANIMALS = ALL DEAD FROM 01-FEB-87 TO 06-FEB-87  
 CTLs = CONTROLS FROM GROUP(S): 1

T I S S U E S W I T H F I N D I N G S

.. A N I M A L S A F F E C T E D ..

CTLs 2 3 4 5 6  
 10 10 10 10 10

	NUMBER EXAMINED:	10	0	0	0	0	10
DUODENUM	NUMBER EXAMINED:	10	0	0	0	0	10
EAR	NUMBER EXAMINED:	10	0	0	0	0	10
EX DIGITORUM LON	NUMBER EXAMINED:	9	10	10	10	10	10
EXORBITAL LACRIM	NUMBER EXAMINED:	10	0	0	0	0	10
-INFLAMMATION,CHRONIC		5	0	0	0	0	5
		50%	0%	0%	0%	0%	50%
-ATROPHY		0	0	0	0	0	1
		0%	0%	0%	0%	0%	10%
ESOPHAGUS	NUMBER EXAMINED:	10	0	0	0	0	10
EYES & OPTIC N.	NUMBER EXAMINED:	9	0	0	0	0	10
HARDERIAN GLAND	NUMBER EXAMINED:	10	0	0	0	0	10
-INFLAMMATION,CHRONIC		2	0	0	0	0	0
		20%	0%	0%	0%	0%	0%
HEART	NUMBER EXAMINED:	10	0	0	0	0	10
-INFLAMMATION,CHRONIC		1	0	0	0	0	3
		10%	0%	0%	0%	0%	30%
ILEUM	NUMBER EXAMINED:	10	0	0	0	0	10
JEJUNUM	NUMBER EXAMINED:	10	0	0	0	0	10
KIDNEY	NUMBER EXAMINED:	10	10	10	10	10	10
-NEPHROPATHY		1	2	1	2	2	0
		10%	20%	10%	20%	20%	0%
-INFLAMMATION,CHRONIC		0	1	1	0	0	1
		0%	10%	10%	0%	0%	10%
-DILATION, PELVIS		0	1	0	0	1	0
		0%	10%	0%	0%	10%	0%

Pathology Table 17 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH INCIDENCE SUMMARY (WITH %) OF MICROSCOPIC OBSERVATIONS(ALL FINDING) PRINTED: 02-FEB-89  
 DIV OF RES SUPP, PATH SERV GP STUDY NUMBER: 86005 PAGE: 3  
 PRESIDIO OF SAN FRANCISCO, CA 94129 PATHOLOGIST(S): WALKER, HARRY  
 SPECIES: RAT/SPRAGUE-DAWLEY STUDY START DATE: 04-NOV-86 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

NOTES: ANIMALS = ALL DEAD FROM 01-FEB-87 TO 06-FEB-87  
 CTLS = CONTROLS FROM GROUP(S): 1

T I S S U E S W I T H F I N D I N G S A N I M A L S A F F E C T E D --  
 DOSAGE GROUP: NO. IN GROUP: CTLS 2 3 4 5 6  
 10 10 10 10 10 10

LIVER ..... NUMBER EXAMINED:  
 -INFLAMMATION, CHRONIC, MULTIFOCAL

-M- Lymphoma / Lymphosarcoma

-NECROSIS, FOCAL

LUNGS ..... NUMBER EXAMINED:  
 -INFLAMMATION, CHRONIC, PERIVASCULAR

-INFLAMMATION, CHRONIC, FOCAL

-INFLAMMATION, ACUTE, PERIVASCULAR

MESENTERY ..... NUMBER EXAMINED:  
 -NECROSIS, FAT

-INFLAMMATION, ACUTE

MAMMARY GLAND ..... NUMBER EXAMINED:

MESENTERIC LYMPH N ..... NUMBER EXAMINED:  
 -M- Lymphoma / Lymphosarcoma

MANDIBULAR GLND ..... NUMBER EXAMINED:

NOSE/TURBINATES ..... NUMBER EXAMINED:

Pathology Table 17 (cont.)



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH INCIDENCE SUMMARY (WITH %) OF MICROSCOPIC OBSERVATIONS(ALL FINDING) PRINTED: 02-FEB-89  
 DIV OF RES SUPP, PATH SERV GP STUDY NUMBER: 86005 PAGE: 4  
 PRESIDIO OF SAN FRANCISCO, CA 94129 PATHOLOGIST(S): WALKER, HARRY  
 SPECIES: RAT/SPRAGUE-DAWLEY STUDY START DATE: 04-NOV-86 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

NOTES: ANIMALS = ALL DEAD FROM 01-FEB-87 TO 06-FEB-87  
 CTLS = CONTROLS FROM GROUP(S): 1

T I S S U E S W I T H F I N D I N G S A N I M A L S A F F E C T E D --  
 CTLS 2 3 4 5 6  
 10 10 10 10 10

PANCREAS ..... NUMBER EXAMINED:  
 -INFLAMMATION, CHRONIC

-ACINAR (EXOCRINE) ATROPHY

PAROTID GLAND ..... NUMBER EXAMINED:  
 -INFLAMMATION, CHRONIC

PITUITARY GLAND ..... NUMBER EXAMINED:

PARATHYROID ..... NUMBER EXAMINED:

RECTUM ..... NUMBER EXAMINED:

SPINAL CORD ..... NUMBER EXAMINED:

SUBMANDIBULAR LN ..... NUMBER EXAMINED:  
 -HYPERPLASIA, LYMPHOD

-M. LYMPHOMA / LYMPHOSARCOMA

SKIN ..... NUMBER EXAMINED:

SUB-LINGUAL GLND ..... NUMBER EXAMINED:  
 -HYPERPLASIA, DUCT

SKELETAL MUSCLE ..... NUMBER EXAMINED:

SCIATIC NERVE ..... NUMBER EXAMINED:

Pathology Table 17 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH INCIDENCE SUMMARY (WITH %) OF MICROSCOPIC OBSERVATIONS(ALL FINDING) PRINTED: 02-FEB-89  
 DIV OF RES SUPP, PATH SERV GP STUDY NUMBER: 86005 PAGE: 5  
 PRESIDIO OF SAN FRANCISCO, CA 94129 PATHOLOGIST(S): WALKER, HARRY  
 SPECIES: RAT/SPRAGUE-DAWLEY STUDY START DATE: 04-NOV-86 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

NOTES: ANIMALS = ALL DEAD FROM 01-FEB-87 TO 06-FEB-87

CTLS = CONTROLS FROM GROUP(S): 1 ANIMAL SEX: CTLS 2 3 4 5 6  
 DOSAGE GROUP: 10 10 10 10 10 10  
 NO. IN GROUP:

-- ANIMALS AFFECTED --

CTLS 2 3 4 5 6  
 10 10 10 10 10 10

SOLEUS ..... NUMBER EXAMINED:  
 -INFLAMMATION,CHRONIC

10 10 10 10 10 10  
 3 3 5 1 2 0  
 30% 30% 50% 10% 20% 0%

-INFLAMMATION,ACUTE

1 0 0 0 0 0  
 10% 0% 0% 0% 0% 0%

-INFLAMMATION,SUBACUTE

0 1 0 1 0 0  
 0% 10% 0% 10% 0% 0%

-DEGENERATION,FOCAL

0 0 0 0 0 0  
 0% 0% 0% 0% 0% 0%

SPLEEN ..... NUMBER EXAMINED:  
 -M- LYMPHOMA / LYMPHOSARCOMA

10 1 0 0 0 10  
 0 1 0 0 0 0  
 0% 100% 0% 0% 0% 0%

STOMACH ..... NUMBER EXAMINED:

10 0 0 0 0 10

TESTES ..... NUMBER EXAMINED:  
 -UNILATERAL ORGAN ATROPHY

10 1 0 0 0 10  
 0 1 0 0 0 0  
 0% 100% 0% 0% 0% 0%

THYROID GLANDS ..... NUMBER EXAMINED:  
 -CYST

10 0 0 0 0 9  
 3 0 0 0 0 1  
 30% 0% 0% 0% 0% 11%

THYMUS ..... NUMBER EXAMINED:  
 -HEMORRHAGE,MULTIFOCAL

9 0 0 0 0 9  
 2 0 0 0 0 3  
 22% 0% 0% 0% 0% 33%

TONGUE ..... NUMBER EXAMINED:

10 0 0 0 0 9

TRACHEA ..... NUMBER EXAMINED:

10 0 0 0 0 10

Pathology Table 17 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH INCIDENCE SUMMARY (WITH %) OF MICROSCOPIC OBSERVATIONS(ALL FINDING) PRINTED: 02-FEB-89  
 DIV OF RES SUPP, PATH SERV GP STUDY NUMBER: 86005 PAGE: 6  
 PRESIDIO OF SAN FRANCISCO, CA 94129 PATHOLOGIST(S): WALKER, HARRY  
 SPECIES: RAT/SPRAGUE-DAWLEY STUDY START DATE: 04-NOV-86 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

NOTES: ANIMALS = ALL DEAD FROM 01-FEB-87 TO 06-FEB-87 -- ANIMALS AFFECTED --  
 CTLS = CONTROLS FROM GROUP(S): 1 ANIMAL SEX: MALES --  
 TISSUES WITH FINDINGS CTLS 2 3 4 5 6  
 NO. IN GROUP: 10 10 10 10 10 10

URINARY BLADDER ..... NUMBER EXAMINED: 10 0 0 0 0 10

Pathology Table 17 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH INCIDENCE SUMMARY (WITH %) OF MICROSCOPIC OBSERVATIONS(ALL FINDING) PRINTED: 02-FEB-89  
 DIV OF RES SUPP, PATH SERV GP STUDY NUMBER: 86005 PAGE: 1  
 PRESIDIO OF SAN FRANCISCO, CA 94129 PATHOLOGIST(S): WALKER, HARRY  
 SPECIES: RAT/SPRAGUE-DAWLEY STUDY START DATE: 04-NOV-86 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

NOTES: ANIMALS = INTERIM SACRIFICE 2 -- ANIMALS AFFECTED --  
 CTLS = CONTROLS FROM GROUP(S): 1 ANIMAL SEX: MALES

T I S S U E S	W I T H	F I N D I N G S	NO. IN GROUP	CTLS	2	3	4	5	6
				5	5	5	5	5	5

ACCESSORY SEX OR ..... NUMBER EXAMINED:  
 -INFLAMMATION,CHRONIC,PROSTATE

-INFLAMMATION,ACUTE

-ATROPHY,PROSTATE

-INFLAMMATION,CHRONIC,PREPUTIAL GLAND

ADRENAL ..... NUMBER EXAMINED:

AORTA ..... NUMBER EXAMINED:

BONE, FEMUR ..... NUMBER EXAMINED:

BRAIN ..... NUMBER EXAMINED:

BONE, STERNUM ..... NUMBER EXAMINED:

CECUM ..... NUMBER EXAMINED:

COLON ..... NUMBER EXAMINED:

DIAPHRAGM ..... NUMBER EXAMINED:

-INFLAMMATION,SUBACUTE

-INFLAMMATION,ACUTE

-INFLAMMATION,CHRONIC

-DEGENERATION,FOCAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH INCIDENCE SUMMARY (WITH %) OF MICROSCOPIC OBSERVATIONS(ALL FINDING) PRINTED: 02-FEB-89  
 DIV OF RES SUPP, PATH SERV GP STUDY NUMBER: 86005 PAGE: 2  
 PRESIDIO OF SAN FRANCISCO, CA 94129 PATHOLOGIST(S): WALKER, HARRY  
 SPECIES: RAT/SPRAGUE-DAWLEY STUDY START DATE: 04-NOV-86 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

NOTES: ANIMALS = INTERIM SACRIFICE 2

CTLS = CONTROLS FROM GROUP(S): 1

ANIMAL SEX:  
 DOSAGE GROUP:  
 NO. IN GROUP:

T I S S U E S W I T H F I N D I N G S

-- A N I M A L S A F F E C T E D --

CTLS 2 3 4 5 6

5 5 5 5 5

DUODENUM ..... NUMBER EXAMINED: 5 0 0 0 0 5  
 EAR ..... NUMBER EXAMINED: 5 0 0 0 0 4  
 EX DIGITORUM LON ..... NUMBER EXAMINED: 5 5 5 5 5  
 EXORBITAL LACRIM ..... NUMBER EXAMINED: 5 0 0 0 0 4  
 -INFLAMMATION, CHRONIC 2 0 0 0 0 0  
 40% 0% 0% 0% 0% 0%  
 -ATROPHY 1 0 0 0 0 0  
 20% 0% 0% 0% 0% 0%

ESOPHAGUS ..... NUMBER EXAMINED: 5 0 0 0 0 5  
 EYES & OPTIC N. .... NUMBER EXAMINED: 1 0 0 0 0 5  
 HARDERIAN GLAND ..... NUMBER EXAMINED: 5 0 0 0 0 5  
 -INFLAMMATION, CHRONIC 1 0 0 0 0 0  
 20% 0% 0% 0% 0% 0%

HEART ..... NUMBER EXAMINED: 5 0 0 0 0 5  
 -INFLAMMATION, CHRONIC 0 0 0 0 0 1  
 0% 0% 0% 0% 0% 20%

ILEUM ..... NUMBER EXAMINED: 5 0 0 0 0 5  
 JEJUNUM ..... NUMBER EXAMINED: 5 0 0 0 0 5  
 KIDNEY ..... NUMBER EXAMINED: 5 5 5 5 5  
 -NEPHROPATHY 0 0 0 0 0 0  
 0% 0% 0% 0% 0% 0%

-INFLAMMATION, CHRONIC 1 0 0 0 0 0  
 20% 0% 0% 0% 0% 0%  
 -DILATION, PELVIS 0 0 0 0 0 0  
 0% 0% 0% 0% 0% 0%

Pathology Table 18 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH INCIDENCE SUMMARY (WITH %) OF MICROSCOPIC OBSERVATIONS(ALL FINDING) PRINTED: 02-FEB-89  
 DIV OF RES SUPP, PATII SERV GP STUDY NUMBER: 86005 PAGE: 3  
 PRESIDIO OF SAN FRANCISCO, CA 94129 PATHOLOGIST(S): WALKER, HARRY  
 SPECIES: RAT/SPRAGUE-DAWLEY STUDY START DATE: 04-NOV-86 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

NOTES: ANIMALS = INTERIM SACRIFICE 2

CTLS = CONTROLS FROM GROUP(S): 1

ANIMAL SEX: CTLS 2 3 4 5 6  
 DOSAGE GROUP: 5 5 5 5 5  
 NO. IN GROUP: 5 5 5 5 5

-- ANIMALS AFFECTED --

LIVER ..... NUMBER EXAMINED:  
 -INFLAMMATION, CHRONIC, MULTIFOCAL

-M- LYMPHOMA / LYMPHOSARCOMA

-NECROSIS, FOCAL

LUNGS ..... NUMBER EXAMINED:  
 -INFLAMMATION, CHRONIC, PERIVASCULAR

-INFLAMMATION, CHRONIC, FOCAL

-INFLAMMATION, ACUTE, PERIVASCULAR

MESENTERY ..... NUMBER EXAMINED:  
 -NECROSIS, FAT

-INFLAMMATION, ACUTE

MAMMARY GLAND ..... NUMBER EXAMINED:

MESENTERIC LYM N ..... NUMBER EXAMINED:  
 -M- LYMPHOMA / LYMPHOSARCOMA

MANDIBULAR GLND ..... NUMBER EXAMINED:

NOSE/TURBINATES ..... NUMBER EXAMINED:

Pathology Table 18 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH INCIDENCE SUMMARY (WITH %) OF MICROSCOPIC OBSERVATIONS(ALL FINDING) PRINTED: 02-FEB-89  
 DIV OF RES SUPP, PATH SERV GP STUDY NUMBER: 86005 PAGE: 4  
 PRESIDIO OF CARLETON, CA 91229 PATHOLOGIST(S): WALKER, HARRY  
 SPECIES: RAT/SPRAGUE-DAWLEY STUDY START DATE: 04-NOV-86 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

NOTES: ANIMALS = INTERIM SACRIFICE 2

CTLS = CONTROLS FROM GROUP(S): 1 ANIMAL SEX:  
 DOSAGE GROUP:  
 NO. IN GROUP:

--- ANIMALS AFFECTED ---

CTLS 2 3 4 5 6  
 5 5 5 5 5

T I S S U E S W I T H F I N D I N G S

PANCREAS ..... NUMBER EXAMINED:

-INFLAMMATION, CHRONIC

5 0 0 0 0 5  
 0 0 0 0 0 0  
 0% 0% 0% 0% 0% 0%

-ACINAR (EXOCRINE) ATROPHY

0 0 0 0 0 0  
 0% 0% 0% 0% 0% 0%

PAROTID GLAND ..... NUMBER EXAMINED:

-INFLAMMATION, CHRONIC

5 0 0 0 0 5  
 0 0 0 0 0 0  
 0% 0% 0% 0% 0% 0%

PITUITARY GLAND ..... NUMBER EXAMINED:

PARATHYROID ..... NUMBER EXAMINED:

RECTUM ..... NUMBER EXAMINED:

SPINAL CORD ..... NUMBER EXAMINED:

SUBMANDIBULAR LN ..... NUMBER EXAMINED:

-HYPERPLASIA, LYMPHOID

0 0 0 0 0 1  
 0 0 0 0 0 1  
 0% 0% 0% 0% 0% 100%

-M- LYMPHOMA / LYMPHOSARCOMA

0 0 0 0 0 0  
 0% 0% 0% 0% 0% 0%

SKIN ..... NUMBER EXAMINED:

SUB-LINGUAL GLND ..... NUMBER EXAMINED:

-HYPERPLASIA, DUCT

5 0 0 0 0 5  
 5 0 0 0 0 5  
 1 0 0 0 0 0  
 20% 0% 0% 0% 0% 0%

SKELETAL MUSCLE ..... NUMBER EXAMINED:

SCIATIC NERVE ..... NUMBER EXAMINED:

5 0 0 0 0 5  
 5 0 0 0 0 4

Pathology Table 18 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY

INCIDENCE SUMMARY (WITH %) OF MICROSCOPIC OBSERVATIONS(ALL FINDING)  
STUDY NUMBER: 86005  
PATHOLOGIST(S): WALKER, HARRY  
STUDY START DATE: 04-NOV-86

NOTES: ANIMALS = INTERIM SACRIFICE 2  
CTLS = CONTROLS FROM GROUP(S): 1

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

.. ANIMALS AFFECTED ..  
.. MALES ..

CTLS 2 3 4 5 6  
5 5 5 5 5

T I S S U E S W I T H F I N D I N G S N O . I N G R O U P

SOLEUS ..... NUMBER EXAMINED:

-INFLAMMATION,CHRONIC

-INFLAMMATION,ACUTE

-INFLAMMATION,SUBACUTE

-DEGENERATION,FOCAL

SPLEEN ..... NUMBER EXAMINED:

-M. LYMPHOMA / LYMPHOSARCOMA

STOMACH ..... NUMBER EXAMINED:

TESTES ..... NUMBER EXAMINED:

-UNILATERAL ORGAN ATROPHY

THYROID GLANDS ..... NUMBER EXAMINED:

-CYST

THYMUS ..... NUMBER EXAMINED:

-HEMORRHAGE,MULTIFOVAL

TONGUE ..... NUMBER EXAMINED:

TRACHEA ..... NUMBER EXAMINED:

Pathology Table 18 (cont.)



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH INCIDENCE SUMMARY (WITH X) OF MICROSCOPIC OBSERVATIONS(ALL FINDING) PRINTED: 02-FEB-89  
 DIV OF RES SUPP, PATH SERV GP STUDY NUMBER: 86005 PAGE: 6  
 PRESIDIO OF SAN FRANCISCO, CA 94129 PATHOLOGIST(S): WALKER, HARRY  
 SPECIES: RAT/SPRAGUE-DAWLEY STUDY START DATE: 04-NOV-86 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

NOTES: ANIMALS = INTERIM SACRIFICE 2  
 CTLS = CONTROLS FROM GROUP(S): 1 ANIMAL SEX: .. A N I M A L S A F F E C T E D ..  
 T I S S U E S W I T H F I N D I N G S CTLS 2 3 4 5 6  
 NO. IN GROUP: 5 5 5 5 5

URINARY BLADDER ..... NUMBER EXAMINED: 5 0 0 0 0 5

Pathology Table 18 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH INCIDENCE SUMMARY (WITH X) OF MICROSCOPIC OBSERVATIONS(ALL FINDING) PRINTED: 02-FEB-89  
 DIV OF RES SUPP, PATH SERV GP STUDY NUMBER: 2GLP8605 PAGE: 1  
 PRESIDIO OF SAN FRANCISCO, CA 94129 PATHOLOGIST(S): WALKER, HARRY  
 SPECIES: RAT/SPRAGUE-DAWLEY STUDY START DATE: 10-DEC-86 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

NOTES: ANIMALS = FINAL SACRIFICE  
 CTLS = CONTROLS FROM GROUP(S): 1

-- ANIMALS AFFECTED --

CTLS 2 3 4 5 6  
 10 10 10 10 10

T I S S U E S W I T H F I N D I N G S

ADRENAL ..... NUMBER EXAMINED:

-CORTICAL NODULAR HYPERTROPHY

-ACCESSORY ADRENAL

AORTA ..... NUMBER EXAMINED:

BONE, FEMUR ..... NUMBER EXAMINED:

BRAIN ..... NUMBER EXAMINED:

BONE, STERNUM ..... NUMBER EXAMINED:

CECUM ..... NUMBER EXAMINED:

COLON ..... NUMBER EXAMINED:

DIAPHRAGM ..... NUMBER EXAMINED:

-INFLAMMATION, CHRONIC

DUODENUM ..... NUMBER EXAMINED:

EAR ..... NUMBER EXAMINED:

EX DIGITORUM LON ..... NUMBER EXAMINED:

EXORBITAL LACRIM ..... NUMBER EXAMINED:

INFLAMMATION, CHRONIC

ESOPHAGUS ..... NUMBER EXAMINED:

EYES & OPTIC N. .... NUMBER EXAMINED:

9 1 0 0 0 10  
 0 0 0 0 0 1  
 0% 0% 0% 0% 0% 10%

0 0 0 0 0 1  
 0% 0% 0% 0% 0% 10%

10 0 0 0 0 10

10 0 0 0 0 10

10 0 0 0 0 10

10 0 0 0 0 9

10 0 0 0 0 9

10 0 0 0 0 9

10 0 0 0 0 9

9 10 10 9 10 10  
 0 0 1 0 0 0  
 0% 0% 10% 0% 0% 0%

10 0 0 0 0 10

8 0 0 0 0 10

10 10 10 10 10 10

10 0 0 0 0 9

2 0 0 0 0 1  
 20% 0% 0% 0% 0% 11%

10 0 0 0 0 10

10 0 0 0 0 10

Pathology Table 19

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH INCIDENCE SUMMARY (WITH %) OF MICROSCOPIC OBSERVATIONS(ALL FINDING) PRINTED: 02-FEB-89  
 DIV OF RES SUPP, PATH SERV GP STUDY NUMBER: 2GLP8605 PAGE: 2  
 PRESIDIO OF SAN FRANCISCO, CA 94129 PATHOLOGIST(S): WALKER, HARRY  
 SPECIES: RAT/SPRAGUE-DAWLEY STUDY START DATE: 10-DEC-86 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

NOTES: ANIMALS = FINAL SACRIFICE CTLS = CONTROLS FROM GROUP(S): 1 ANIMAL SEX: CTLS 2 3 4 5 6  
 TISSUES WITH FINDINGS NO. IN GROUP: 10 10 10 10 10 10

--- ANIMALS AFFECTED ---  
 --- FEMALES ---

HARDERIAN GLAND ..... NUMBER EXAMINED: 10 0 0 0 0 10  
 -INFLAMMATION, CHRONIC 0 0 0 0 0 3  
 0% 0% 0% 0% 0% 30%

HEART ..... NUMBER EXAMINED: 10 0 0 0 0 10  
 ILEUM ..... NUMBER EXAMINED: 10 0 0 0 0 10

JEJUNUM ..... NUMBER EXAMINED: 10 0 0 0 0 10  
 KIDNEY ..... NUMBER EXAMINED: 10 10 10 10 9 10  
 -INFLAMMATION, CHRONIC 2 0 0 0 1 0  
 20% 0% 0% 0% 11% 0%

-MINERALIZATION 3 3 6 2 1 4  
 30% 30% 60% 20% 11% 40%

-NEPHROPATHY 0 0 0 0 1 0  
 0% 0% 0% 0% 11% 0%

-INFLAMMATION, CHRONIC-ACTIVE, SEROSA 0 0 1 0 0 0  
 0% 0% 10% 0% 0% 0%

-B-ADENOMA 0 0 0 0 1 0  
 0% 0% 0% 0% 11% 0%

LIVER ..... NUMBER EXAMINED: 10 10 10 10 10 10  
 -INFLAMMATION, CHRONIC, MULTIFOCAL 2 1 2 0 1 4  
 20% 10% 20% 0% 10% 40%

-FATTY CHANGE, FOCAL 1 0 0 0 0 0  
 10% 0% 0% 0% 0% 0%

-VACUOLIZATION, FOCAL 0 0 0 1 0 0  
 0% 0% 0% 10% 0% 0%

LUNGS ..... NUMBER EXAMINED: 10 10 10 10 10 10  
 -INFLAMMATION, CHRONIC, FOCAL 0 0 0 0 0 1  
 0% 0% 0% 0% 0% 10%

Pathology Table 19 (cont.)



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH INCIDENCE SUMMARY (WITH %) OF MICROSCOPIC OBSERVATIONS(ALL FINDING) PRINTED: 02-FEB-89  
 DIV OF RES SUPP, PATH SERV GP STUDY NUMBER: 2GLP8605 PAGE: 4  
 PRESIDIO OF SAN FRANCISCO, CA 94129 PATHOLOGIST(S): WALKER, HARRY  
 SPECIES: RAT/SPRAGUE-DAWLEY STUDY START DATE: 10-DEC-86 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

NOTES: ANIMALS = FINAL SACRIFICE

CTLS = CONTROLS FROM GROUP(S): 1

ANIMAL SEX:

DOSAGE GROUP:

NO. IN GROUP:

T I S S U E S W I T H F I N D I N G S

-- ANIMALS AFFECTED --

CTLS 2 3 4 5 6

10 10 10 10 10 10

PARATHYROID ..... NUMBER EXAMINED: 9 0 0 0 0 10

RECTUM ..... NUMBER EXAMINED: 10 0 0 0 0 9

SPINAL CORD ..... NUMBER EXAMINED: 10 0 0 0 0 10

SKIN ..... NUMBER EXAMINED: 9 0 0 0 0 9

SUB-LINGUAL GLND ..... NUMBER EXAMINED: 10 0 0 0 0 10

SKELETAL MUSCLE ..... NUMBER EXAMINED: 10 0 0 0 0 9

SCIATIC NERVE ..... NUMBER EXAMINED: 10 0 0 0 0 9

SOLEUS ..... NUMBER EXAMINED: 10 10 10 10 10 10

-INFLAMMATION, CHRONIC 2 0 2 1 2 0

20% 0% 20% 10% 20% 0%

-INFLAMMATION, ACUTE 0 0 0 0 0 0

0% 0% 0% 0% 0% 0%

-DEGENERATION, FOCAL 0 0 0 0 0 0

0% 0% 0% 0% 0% 0%

-INFLAMMATION, SUBACUTE 0 0 0 0 0 0

0% 0% 0% 0% 0% 0%

SPLEEN ..... NUMBER EXAMINED: 10 0 1 0 0 10

-NECROGRANULOMA 0 0 1 0 0 0

0% 0% 100% 0% 0% 0%

STOMACH ..... NUMBER EXAMINED: 10 0 0 0 0 9

THYROID GLANDS ..... NUMBER EXAMINED: 10 0 0 0 0 10

-CYST 1 0 0 0 0 2

10% 0% 0% 0% 0% 20%

-INFLAMMATION, CHRONIC 0 0 0 0 0 1

0% 0% 0% 0% 0% 10%

Pathology Table 19 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY

INCIDENCE SUMMARY (WITH %) OF MICROSCOPIC OBSERVATIONS(ALL FINDING)  
STUDY NUMBER: 2GLP8605  
PATHOLOGIST(S): WALKER, HARRY  
STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89  
PAGE: 5

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

NOTES: ANIMALS = FINAL SACRIFICE  
CTLS = CONTROLS FROM GROUP(S): 1

ANIMAL SEX:  
DOSAGE GROUP:  
NO. IN GROUP:

TISSUES WITH FINDINGS

THYMUS  
-HEMORRHAGE, MULTIFOCAL

TONGUE  
-MINERALIZATION, FOCAL

TRACHEA  
URINARY BLADDER

UTERUS  
-SQUAMOUS METAPLASIA OF THE MUCOSA

-DILATATION OF THE UTERINE LUMEN (HYDROMETRA)

ANIMALS AFFECTED

CTLS 2 3 4 5 6  
10 10 10 10 10 10

10 0 0 0 0 8  
1 0 0 0 0 1  
10% 0% 0% 0% 0% 12%

10 0 0 0 0 9  
1 0 0 0 0 0  
10% 0% 0% 0% 0% 0%

10 0 0 0 0 10  
9 0 0 0 0 9

9 0 0 0 0 9  
1 0 0 0 0 0  
11% 0% 0% 0% 0% 0%

0 0 0 0 0 1  
0% 0% 0% 0% 0% 11%

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH INCIDENCE SUMMARY (WITH %) OF MICROSCOPIC OBSERVATIONS (NON-NEOPLASMS) PRINTED: 02-FEB-89  
 DIV OF RES SUPP, PATH SERV GP STUDY NUMBER: 2GLPB605 PAGE: 1  
 PRESIDIO OF SAN FRANCISCO, CA 94129 PATHOLOGIST(S): WALKER, HARRY  
 SPECIES: RAT/SPRAGUE-DAWLEY STUDY START DATE: 10-DEC-86 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

NOTES: ANIMALS = INTERIM SACRIFICE 2  
 CTLS = CONTROLS FROM GROUP(S): 1

T I S S U E S    W I T H    F I N D I N G S    A N I M A L S    A F F E C T E D     
 CTLS    2    3    4    5    6  
 NO. IN GROUP:    5    5    5    5    5

ADRENAL	5	0	0	0	0	5
-CORTICAL MODULAR HYPERTROPHY	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0%
-ACCESSORY ADRENAL	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0%
AORTA	5	0	0	0	0	5
BONE, FEMUR	5	0	0	0	0	5
BRAIN	5	0	0	0	0	5
BONE, STERNUM	5	0	0	0	0	5
CECUM	5	0	0	0	0	5
COLON	5	0	0	0	0	5
DIAPHRAGM	5	5	5	5	5	5
-INFLAMMATION, CHRONIC	0	1	0	0	0	0
	0%	20%	0%	0%	0%	0%
DUODENUM	5	0	0	0	0	5
EAR	5	0	0	0	0	5
EX DIGITORUM LON	5	5	5	5	5	5
EXORBITAL LACRIM	5	0	0	0	0	4
-INFLAMMATION, CHRONIC	0	0	0	0	0	1
	0%	0%	0%	0%	0%	25%
ESOPHAGUS	5	0	0	0	0	5
EYES & OPTIC N.	5	0	0	0	0	5

Pathology Table 20

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH INCIDENCE SUMMARY (WITH %) OF MICROSCOPIC OBSERVATIONS (NON-NEOPLASMS) PRINTED: 02-FEB-89  
 DIV OF RES SUPP, PATH SERV GP STUDY NUMBER: 2GLP8605 PAGE: 2  
 PRESIDIO OF SAN FRANCISCO, CA 94129 PATHOLOGIST(S): WALKER, HARRY  
 SPECIES: RAT/SPRAGUE-DAWLEY STUDY START DATE: 10-DEC-86 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

NOTES: ANIMALS = INTERIM SACRIFICE 2 ... ANIMALS AFFECTED ...  
 CTLS = CONTROLS FROM GROUP(S): 1 ANIMAL SEX: ... FEMALES ...

T I S S U E S W I T H F I N D I N G S NO. IN GROUP: ...  
 CTLS 2 3 4 5 6  
 5 5 5 5 5

HARDERIAN GLAND ..... NUMBER EXAMINED: 5 0 0 0 0 5  
 -INFLAMMATION, CHRONIC 0 0 0 0 0 0  
 0% 0% 0% 0% 0% 0%

HEART ..... NUMBER EXAMINED: 5 0 0 0 0 5

ILEUM ..... NUMBER EXAMINED: 5 0 0 0 0 5

JEJUNUM ..... NUMBER EXAMINED: 5 0 0 0 0 5

KIDNEY ..... NUMBER EXAMINED: 5 5 5 5 5 5  
 0 1 1 0 0 0  
 0% 20% 20% 0% 0% 0%

-INFLAMMATION, CHRONIC 1 3 3 2 2 4  
 20% 60% 60% 40% 40% 80%

-MINERALIZATION 0 0 0 0 0 1  
 0% 0% 0% 0% 0% 20%

-NEPHROPATHY 0 0 0 0 0 0  
 0% 0% 0% 0% 0% 0%

-INFLAMMATION, CHRONIC-ACTIVE, SEROSA 0 0 0 0 0 0  
 0% 0% 0% 0% 0% 0%

LIVER ..... NUMBER EXAMINED: 5 5 5 5 5 5  
 3 0 0 2 2 2  
 60% 0% 0% 40% 40% 40%

-INFLAMMATION, CHRONIC, MULTIFOCAL 0 0 0 0 0 0  
 0% 0% 0% 0% 0% 0%

-FATTY CHANGE, FOCAL 0 0 0 0 0 0  
 0% 0% 0% 0% 0% 0%

-VACUOLIZATION, FOCAL 0 0 0 0 0 0  
 0% 0% 0% 0% 0% 0%

LUNGS ..... NUMBER EXAMINED: 5 5 5 5 5 5  
 0 0 0 0 0 1  
 0% 0% 0% 0% 0% 20%

-INFLAMMATION, CHRONIC, FOCAL 0 0 0 0 0 0  
 0% 0% 0% 0% 0% 0%

-INFLAMMATION, CHRONIC, GRANULOMATOUS 0 0 0 0 0 0  
 0% 0% 0% 0% 0% 0%

Pathology Table 20 (cont.)



LEITENMAN ARMY INSTITUTE OF RESEARCH INCIDENCE SUMMARY (WITH %) OF MICROSCOPIC OBSERVATIONS(NON-NEOPLASMS)  
DIV OF RES SUPP, PATH SERV GP STUDY NUMBER: 2GLP8605 PRINTED: 02-FEB-89  
PRESIDIO OF SAN FRANCISCO, CA 94129 PATHOLOGIST(S): WALKER, HARRY PAGE: 3  
SPECIES: R1/SPRAGUE-DAWLEY STUDY START DATE: 10-DEC-86 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

NOTES: ANIMALS = INTERIM SACRIFICE 2

[illegible]

.....	NUMBER EXAMINED:
LUNGS .....	5 5 5 5 5
INFLAMMATION, CHRONIC, PERIVASCULAR .....	0 1 1 0 0

-AGGREGATIONS OF ALVEOLAR MACROPHAGES (HISTIOCYTOSIS)

SUBMANDIBULAR LN ..... NUMBER EXAMINED: -HYPERPLASIA, LYMPHOID

**MAMMARY GLAND** ..... **NUMBER EXAMINED:**

MESENTERIC LYM N ..... NUMBER EXAMINED:

MANDIBULAR GLND ..... NUMBER EXAMINED: .....

NOSE/TURBINATES	NUMBER EXAMINED:
.....	.....

OVARIES .....	NUMBER EXAMINED:
- PARA-OVARIAN CYST(S)	

PANCREAS ..... NUMBER EXAMINED: .....

-ACINAR (EXOCRINE) ATROPHY .....

-CHRONIC INFLAMMATION

PAROTID GLAND ..... NUMBER EXAMINED: .....

PITUITARY GLAND ..... NUMBER EXAMINED:  
- CYST(S)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

STUDY NUMBER: 7GLP8605  
 PATHOLOGIST(S): W. KER, HARRY  
 STUDY START DATE: 10-DEC-86

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

NOTES: ANIMALS = INTERIM SACRIFICE 2  
 CTLS = CONTROLS FROM GROUP(S): 1

ANIMALS AFFECTED --  
 CTLS 2 3 4 5 6  
 5 5 5 5 5

ANIMAL SEX:  
 DOSAGE GROUP:  
 NO. IN GROUP:

TISSUES WITH FINDINGS

PARATHYROID	3	0	0	0	0	5
RECTUM	5	0	0	0	0	5
SPINAL CORD	5	0	0	0	0	5
SKIN	5	0	0	0	0	5
SUB-LINGUAL GLND	5	0	0	0	0	5
SKELETAL MUSCLE	5	0	0	0	0	5
SCIATIC NERVE	5	0	0	0	0	5
SOLEUS	5	5	5	5	5	5
-INFLAMMATION, CHRONIC	0	0	1	1	0	0
	0%	0%	20%	20%	0%	0%
-INFLAMMATION, ACUTE	0	0	0	0	0	1
	0%	0%	0%	0%	0%	20%
-DEGENERATION, FOCAL	0	0	0	0	1	0
	0%	0%	0%	0%	20%	0%
-INFLAMMATION, SUBACUTE	0	0	0	0	1	0
	0%	0%	0%	0%	20%	0%
SPLEEN	5	0	0	0	0	5
-NECROGRANULOMA	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0%
STOMACH	5	0	0	0	0	5
THYROID GLANDS	5	0	0	0	0	5
-CYST	3	0	0	0	0	2
	60%	0%	0%	0%	0%	40%
-INFLAMMATION, CHRONIC	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0%

Pathology Table 20 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH/INCIDENCE SUMMARY (WITH %) OF MICROSCOPIC OBSERVATIONS(NON-NEOPLASMS) PRINTED: 02-FEB-89  
 DIV OF RES SUPP, PATH SERV GP STUDY NUMBER: 2GLP8605 PAGE: 5  
 PRESIDIO OF SAN FRANCISCO, CA 94129 PATHOLOGIST(S): WALKER, HARRY  
 SPECIES: RAT/SPRAGUE-DAWLEY STUDY START DATE: 10-DEC-86 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

NOTES: ANIMALS = INTERIM SACRIFICE 2

CTLS = CONTROLS FROM GROUP(S): 1

ANIMAL SEX:  
 DOSAGE GROUP:  
 NO. IN GROUP:

T I S S U E S W I T H F I N D I N G S

-- ANIMALS AFFECTED --

CTLS 2 3 4 5 6  
 5 5 5 5 5

THYMUS ..... NUMBER EXAMINED:  
 -HEMORRHAGE, MULTIFOCAL

5 0 0 0 0 5  
 0 0 0 0 0 0  
 0% 0% 0% 0% 0% 0%

TONGUE ..... NUMBER EXAMINED:  
 -MINERALIZATION, FOCAL

5 0 0 0 0 5  
 0 0 0 0 0 0  
 0% 0% 0% 0% 0% 0%

TRACHEA ..... NUMBER EXAMINED:

5 0 0 0 0 5

URINARY BLADDER ..... NUMBER EXAMINED:

5 0 0 0 0 5

UTERUS ..... NUMBER EXAMINED:

5 0 0 0 0 5

-SQUAMOUS METAPLASIA OF THE MUCOSA

0 0 0 0 0 0  
 0% 0% 0% 0% 0% 0%

-DILATATION OF THE UTERINE LUMEN (HYDROMETRA)

0 0 0 0 0 1  
 0% 0% 0% 0% 0% 20%

Pathology Table 20 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

PRINTED: 02-FEB-89  
 PAGE: 1

INCIDENCE SUMMARY OF MICROSCOPIC OBSERVATIONS(ALL FINDING)

STUDY NUMBER: 86005

PATHOLOGIST(S): WALKER, HARRY

STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

NOTES: ANIMALS = ALL DEAD FROM 01-FEB-87 TO 06-FEB-87

CTLS = CONTROLS FROM GROUP(S): 1

ANIMAL SEX:

DOSAGE GROUP:

NO. IN GROUP:

ANIMALS AFFECTED

MALES

CTLS 2 3 4 5 6

10 10 10 10 10

T I S S U E S W I T H F I N D I N G S

ACCESSORY SEX OR ..... NUMBER EXAMINED:

-INFLAMMATION,CHRONIC,PROSTATE

-INFLAMMATION,ACUTE

-ATROPHY,PROSTATE

-INFLAMMATION,CHRONIC,PREPUTIAL GLAND

ADRENAL ..... NUMBER EXAMINED:

AORTA ..... NUMBER EXAMINED:

BONE, FEMUR ..... NUMBER EXAMINED:

BRAIN ..... NUMBER EXAMINED:

BONE, STERNUM ..... NUMBER EXAMINED:

CECUM ..... NUMBER EXAMINED:

COLON ..... NUMBER EXAMINED:

DIAPHRAGM ..... NUMBER EXAMINED:

-INFLAMMATION,SUBACUTE

-INFLAMMATION,ACUTE

-INFLAMMATION,CHRONIC

-DEGENERATION,FOCAL

DUODENUM ..... NUMBER EXAMINED:

EAR ..... NUMBER EXAMINED:

EX DIGITORUM LON ..... NUMBER EXAMINED:

EXORBITAL LACRIM ..... NUMBER EXAMINED:

-INFLAMMATION,CHRONIC

-ATROPHY

NOTE: ENTRIES FLAGGED WITH A - (MINUS) ARE SIGNIFICANTLY DIFFERENT FROM CONTROL AT THE 0.05 LEVEL USING KOLMOGOROV-SMIRNOV TWO-TAILED TEST.

Pathology Table 21

LETTEMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY

NOTES: ANIMALS = ALL DEAD FROM 01-FEB-87 TO 06-FEB-87  
 CTLS = CONTROLS FROM GROUP(S): 1

Y I S S U E S	W I T H	F I M D I N G S	S E X :	ANIMAL	NO. IN GROUP:	USAGE GROUP:

ANIMALS AFFECTED --  
-- MALES --

	2	3	4	5	6
CTLS	10	10	10	10	10

ESOPHAGUS .....	NUMBER EXAMINED:	10	0	0	0	0	10
-----------------	------------------	----	---	---	---	---	----

EYES & OPTIC N.	NUMBER EXAMINED:
9	0
0	0
0	0
0	0
10	0

HARDERIAN GLAND .....	NUMBER EXAMINED:
	10    0    0    0    0    0    10

# INFLAMMATION, CHRONIC

HEART .....	1	0	0	0	0	3
- INFLAMMATION, CHRONIC						

ILEUM	NUMBER EXAMINED:
.....	10
.....	0
.....	0
.....	0
.....	10

JEJUNUM ..... NUMBER EXAMINED: 10 0 0 0 0 0 10

KIDNEY ..... NUMBER EXAMINED: 10 10 10 10 10

REFRIGERATOR	0	1	1	0	1
-INFLAMMATION, CHRONIC	0	1	1	0	1

[illegible]

INFLAMMATION, CHRONIC, MULTIFOCAL	1	0	2	0	0
.....	1	0	2	0	0

[illegible]

LUNGS .....	NUMBER EXAMINED:	10	10	10	10	10
-------------	------------------	----	----	----	----	----

	1	1	0	0	0	1	0
INFLAMMATION, CHRONIC, FOCAL	1	1	0	0	0	1	0
INFLAMMATION, CHRONIC, EXTENSIVE	1	1	0	0	0	1	0

המחלקה לבריאות הציבור, משרד הבריאות, תל אביב, ישראל

REACTANT	0	0	0	0	0	1
NECROSIS, FAT						

STOCK, NOT BOND, IN

..... NUMBER OF SAMPLES

RESPIRATORY CH W .....			
-M- LYMPHOMA / LYMPHOSARCOMA	0	1	0
	0	1	0
	0	0	0

NOTE: ENTRIES FLAGGED WITH A - (MINUS) ARE SIGNIFICANTLY DIFFERENT FROM CONTROL AT THE 0.05 LEVEL USING KOLMOGOROV-SMIRNOV TWO-TAILED TEST.

Pathology...Table...21...(cont...)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

PRINTED: 02-FEB-89  
 PAGE: 3

## INCIDENCE SUMMARY OF MICROSCOPIC OBSERVATIONS(ALL FINDING)

STUDY NUMBER: 86005

PATHOLOGIST(S): WALKER, HARRY

STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

NOTES: ANIMALS = ALL DEAD FROM 01-FEB-87 TO 06-FEB-87

CTLs = CONTROLS FROM GROUP(S): 1

ANIMAL SEX:

DOSAGE GROUP:

NO. IN GROUP:

-- ANIMALS AFFECTED --

CTLs

2

3

4

5

6

10

10

10

10

10

0

0

0

0

0

0

0

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NOTE: ENTRIES FLAGGED WITH A - (MINUS) ARE SIGNIFICANTLY DIFFERENT FROM CONTROL AT THE 0.05 LEVEL USING KOLMOGOROV-SMIRNOV TWO-TAILED TEST.

Pathology Table 21 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY

INCIDENCE SUMMARY OF MICROSCOPIC OBSERVATIONS(CALL FINDING)  
STUDY NUMBER: 86005  
PATHOLOGIST(S): WALKER, HARRY  
STUDY START DATE: 04-NOV-86

PRINTED: 02-FEB-89  
PAGE: 4

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

NOTES: ANIMALS = ALL DEAD FROM 01-FEB-87 TO 06-FEB-87  
CTLs = CONTROLS FROM GROUP(S): 1

ANIMAL SEX:  
DOSAGE GROUP:  
NO. IN GROUP:

CTLs 2 3 4 5 6  
10 10 10 10 10

MALES

NUMBER EXAMINED:

SPLEEN  
-M. LYMPHOMA / LYMPHOSARCOMA

STOMACH

TESTES  
-UNILATERAL ORGAN ATROPHY

THYROID GLANDS  
-CYST

THYMUS  
-HEMORRHAGE, MULTIFOCAL

TONGUE

TRACHEA

URINARY BLADDER

NUMBER EXAMINED:

10 1 0 0 0 10  
0 1 0 0 0 0

10 0 0 0 0 10

10 1 0 0 0 10  
0 1 0 0 0 0

10 0 0 0 0 9  
3 0 0 0 0 1

9 0 0 0 0 9  
2 0 0 0 0 3

10 0 0 0 0 9

10 0 0 0 0 10

10 0 0 0 0 10

NOTE: ENTRIES FLAGGED WITH A - (MINUS) ARE SIGNIFICANTLY DIFFERENT FROM CONTROL AT THE 0.05 LEVEL USING KOLMOGOROV-SMIRNOV TWO-TAILED TEST.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

PRINTED: 02-FEB-89  
 PAGE: 1

INCIDENCE SUMMARY OF MICROSCOPIC OBSERVATIONS(ALL FINDING)  
 STUDY NUMBER: 86005  
 PATHOLOGIST(S): WALKER, HARRY  
 STUDY START DATE: 04-NOV-86  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

NOTES: ANIMALS = INTERIM SACRIFICE 2

CTLS = CONTROLS FROM GROUP(S): 1

ANIMAL SEX:  
 DOSAGE GROUP:  
 NO. IN GROUP:

T I S S U E S    W I T H    F I N D I N G S

ANIMALS AFFECTED

CTLS    2    3    4    5    6

5    5    5    5    5    5

ACCESSORY SEX OR ..... NUMBER EXAMINED:

-INFLAMMATION,CHRONIC,PROSTATE

-INFLAMMATION,ACUTE

-ATROPHY,PROSTATE

-INFLAMMATION,CHRONIC,PREPUTIAL GLAND

ADRENAL ..... NUMBER EXAMINED:

AORTA ..... NUMBER EXAMINED:

BONE, FEMUR ..... NUMBER EXAMINED:

BRAIN ..... NUMBER EXAMINED:

BONE, STERNUM ..... NUMBER EXAMINED:

CECUM ..... NUMBER EXAMINED:

COLON ..... NUMBER EXAMINED:

DIAPHRAGM ..... NUMBER EXAMINED:

-INFLAMMATION,SUBACUTE

-INFLAMMATION,ACUTE

-INFLAMMATION,CHRONIC

-DEGENERATION,FOCAL

DUODENUM ..... NUMBER EXAMINED:

EAR ..... NUMBER EXAMINED:

EX DIGITORUM LON ..... NUMBER EXAMINED:

EXORBITAL LACRIM ..... NUMBER EXAMINED:

-INFLAMMATION,CHRONIC

-ATROPHY

NOTE: ENTRIES FLAGGED WITH A - (MINUS) ARE SIGNIFICANTLY DIFFERENT FROM CONTROL AT THE 0.05 LEVEL USING KOLMOGOROV-SMIRNOV TWO-TAILED TEST.



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

PRINTED: 02-FEB-89  
 PAGE: 2

INCIDENCE SUMMARY OF MICROSCOPIC OBSERVATIONS(ALL FINDING)

STUDY NUMBER: 86005

PATHOLOGIST(S): WALKER, HARRY

STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

NOTES: ANIMALS = INTERIM SACRIFICE 2

CTLS = CONTROLS FROM GROUP(S): 1

ANIMAL SEX:

DOSAGE GROUP:

NO. IN GROUP:

-- ANIMALS AFFECTED --

CTLS 2 3 4 5 6

5 5 5 5 5

5 5 5 5 5

T I S S U E S W I T H F I N D I N G S

ESOPHAGUS ..... NUMBER EXAMINED:

EYES & OPTIC N. .... NUMBER EXAMINED:

HARDERIAN GLAND ..... NUMBER EXAMINED:

- INFLAMMATION, CHRONIC

HEART ..... NUMBER EXAMINED:

- INFLAMMATION, CHRONIC

ILEUM ..... NUMBER EXAMINED:

JEJUNUM ..... NUMBER EXAMINED:

KIDNEY ..... NUMBER EXAMINED:

- NEPHROPATHY

- INFLAMMATION, CHRONIC

- DILATION, PELVIS

LIVER ..... NUMBER EXAMINED:

- INFLAMMATION, CHRONIC, MULTIFOCAL

- M- LYMPHOMA / LYMPHOSARCOMA

- NECROSIS, FOCAL

LUNGS ..... NUMBER EXAMINED:

- INFLAMMATION, CHRONIC, PERIVASCULAR

- INFLAMMATION, CHRONIC, FOCAL

- INFLAMMATION, ACUTE, PERIVASCULAR

MESENTERY ..... NUMBER EXAMINED:

- NECROSIS, FAT

- INFLAMMATION, ACUTE

MAMMARY GLAND ..... NUMBER EXAMINED:

MESENTERIC LYMPH N ..... NUMBER EXAMINED:

- M- LYMPHOMA / LYMPHOSARCOMA

NOTE: ENTRIES FLAGGED WITH A - (MINUS) ARE SIGNIFICANTLY DIFFERENT FROM CONTROL AT THE 0.05 LEVEL USING KOLMOGOROV-SMIRNOV TWO-TAILED TEST.

Pathology Table 22 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

PRINTED: 02-FEB-89  
 PAGE: 3

## INCIDENCE SUMMARY OF MICROSCOPIC OBSERVATIONS(ALL FINDING)

STUDY NUMBER: 86005

PATHOLOGIST(S): WALKER, HARRY

STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

NOTES: ANIMALS = INTERIM SACRIFICE 2

CTLS = CONTROLS FROM GROUP(S): 1

ANIMAL SEX:  
DOSAGE GROUP:  
NO. IN GROUP:

-- ANIMALS AFFECTED --

CTLS	2	3	4	5	6
5	5	5	5	5	5

T I S S U E S   W I T H   F I N D I N G S

	NUMBER EXAMINED:	5	0	0	0	0	5
MANDIBULAR GLND	NUMBER EXAMINED:	5	0	0	0	0	5
NOSE/TURBINATES	NUMBER EXAMINED:	5	0	0	0	0	5
PANCREAS	NUMBER EXAMINED:	5	0	0	0	0	5
-INFLAMMATION, CHRONIC		0	0	0	0	0	0
-ACINAR (EXOCRINE) ATROPHY		0	0	0	0	0	0
PAROTID GLAND	NUMBER EXAMINED:	5	0	0	0	0	5
-INFLAMMATION, CHRONIC		0	0	0	0	0	0
PITUITARY GLAND	NUMBER EXAMINED:	5	0	0	0	0	5
PARATHYROID	NUMBER EXAMINED:	5	0	0	0	0	5
RECTUM	NUMBER EXAMINED:	5	0	0	0	0	5
SPINAL CORD	NUMBER EXAMINED:	5	0	0	0	0	5
SUBMANDIBULAR LN	NUMBER EXAMINED:	0	0	0	0	0	1
-HYPERPLASIA, LYMPHOID		0	0	0	0	0	1
-H- LYMPHOMA / LYMPHOSARCOMA		0	0	0	0	0	0
SKIN	NUMBER EXAMINED:	5	0	0	0	0	5
SUB-LINGUAL GLND	NUMBER EXAMINED:	5	0	0	0	0	5
-HYPERPLASIA, DUCT		1	0	0	0	0	0
SKELETAL MUSCLE	NUMBER EXAMINED:	5	0	0	0	0	5
SCIATIC NERVE	NUMBER EXAMINED:	5	0	0	0	0	4
SOLEUS	NUMBER EXAMINED:	5	5	5	5	5	5
-INFLAMMATION, CHRONIC		1	2	1	0	0	0
-INFLAMMATION, ACUTE		0	0	0	0	0	0
-INFLAMMATION, SUBACUTE		0	0	0	0	0	0
-DEGENERATION, FOCAL		0	0	0	0	1	0

NOTE: ENTRIES FLAGGED WITH A - (MINUS) ARE SIGNIFICANTLY DIFFERENT FROM CONTROL AT THE 0.05 LEVEL USING KOLMOGOROV-SMIRNOV TWO-TAILED TEST.

Pathology Table 22 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

PRINTED: 02-FEB-89  
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INCIDENCE SUMMARY OF MICROSCOPIC OBSERVATIONS(ALL FINDING)

STUDY NUMBER: 86005

PATHOLOGIST(S): WALKER, HARRY

STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

NOTES: ANIMALS = INTERIM SACRIFICE 2

CTLS = CONTROLS FROM GROUP(S): 1

ANIMAL SEX:  
 DOSAGE GROUP:  
 NO. IN GROUP:

-- ANIMALS AFFECTED --

CTLS 2 3 4 5 6

5 5 5 5 5

T I S S U E S W I T H F I N D I N G S

SPLEEN ..... NUMBER EXAMINED: 5 0 0 0 0 5

-M- LYMPHOMA / LYMPHOSARCOMA

STOMACH ..... NUMBER EXAMINED: 5 0 0 0 0 5

TESTES ..... NUMBER EXAMINED: 5 0 0 0 0 5

-UNILATERAL ORGAN ATROPHY

THYROID GLANDS ..... NUMBER EXAMINED: 5 0 0 0 0 5

-CYST

THYMUS ..... NUMBER EXAMINED: 5 0 0 0 0 5

-HEMORRHAGE, MULTIFOCAL

TONGUE ..... NUMBER EXAMINED: 5 0 0 0 0 5

TRACHEA ..... NUMBER EXAMINED: 5 0 0 0 0 5

URINARY BLADDER ..... NUMBER EXAMINED: 5 0 0 0 0 5

NOTE: ENTRIES FLAGGED WITH A - (MINUS) ARE SIGNIFICANTLY DIFFERENT FROM CONTROL AT THE 0.05 LEVEL USING KOLMOGOROV-SMIRNOV TWO-TAILED TEST.

Pathology Table 22 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

PRINTED: 02-FEB-89  
 PAGE: 1

## INCIDENCE SUMMARY OF MICROSCOPIC OBSERVATIONS(ALL FINDING)

STUDY NUMBER: 2GLP8605

PATHOLOGIST(S): WALKER, HARRY

STUDY START DATE: 10-DEC-86

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

NOTES: ANIMALS = FINAL SACRIFICE

CTLS = CONTROLS FROM GROUP(S): 1

ANIMAL SEX:

DOSAGE GROUP:

NO. IN GROUP:

-- ANIMALS AFFECTED --

CTLS 2 3 4 5 6

10 10 10 10 10

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NOTE: ENTRIES FLAGGED WITH A - (MINUS) ARE SIGNIFICANTLY DIFFERENT FROM CONTROL AT THE 0.05 LEVEL USING KOLMOGOROV-SMIRNOV TWO-TAILED TEST.

Pathology Table 23

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY

INCIDENCE SUMMARY OF MICROSCOPIC OBSERVATIONS(ALL FINDING)  
STUDY NUMBER: 2GLP8605  
PATHOLOGIST(S): WALKER, HARRY  
STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89  
PAGE: 2

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

NOTES: ANIMALS = FINAL SACRIFICE  
CTLS = CONTROLS FROM GROUP(S): 1

ANIMAL SEX:  
DOSAGE GROUP:  
NO. IN GROUP:

T I S S U E S W I T H F I N D I N G S

ILEUM ..... NUMBER EXAMINED: 10 0 0 0 0 10

JEJUNUM ..... NUMBER EXAMINED: 10 0 0 0 0 10

KIDNEY ..... NUMBER EXAMINED: 10 10 10 10 9 10

-INFLAMMATION, CHRONIC 2 0 0 0 1 0

-MINERALIZATION 3 3 6 2 1 4

-NEPHROPATHY 0 0 0 0 1 0

-INFLAMMATION, CHRONIC-ACTIVE, SEROSA 0 0 0 1 0 0

-B-ADENOMA 0 0 0 0 1 0

LIVER ..... NUMBER EXAMINED: 10 10 10 10 10 10

-INFLAMMATION, CHRONIC, MULTIFOCAL 2 1 2 0 1 4

-FATTY CHANGE, FOCAL 1 0 0 0 0 0

-VACUOLIZATION, FOCAL 0 0 0 1 0 0

LUNGS ..... NUMBER EXAMINED: 10 10 10 10 10 10

-INFLAMMATION, CHRONIC, FOCAL 0 0 0 0 0 1

-INFLAMMATION, CHRONIC, GRANULOMATOUS 0 1 0 0 0 0

-INFLAMMATION, CHRONIC, PERIVASCULAR 0 0 0 0 0 0

-AGGREGATIONS OF ALVEOLAR MACROPHAGES (HISTIOCYTOSIS) 0 0 0 1 1 0

SUBMANDIBULAR LN ..... NUMBER EXAMINED: 2 0 0 0 0 1

-HYPERPLASIA, LYMPHOID 2 0 0 0 0 1

MAMMARY GLAND ..... NUMBER EXAMINED: 7 0 0 0 0 8

MESENTERIC LYM N ..... NUMBER EXAMINED: 10 0 0 0 0 8

MANDIBULAR GLND ..... NUMBER EXAMINED: 10 0 0 0 0 10

NOSE/TURBINATES ..... NUMBER EXAMINED: 10 0 0 0 0 10

OVARIES ..... NUMBER EXAMINED: 10 0 0 0 0 10

-PARA-OVARIAN CYST(S) 1 0 0 0 0 0

NOTE: ENTRIES FLAGGED WITH A - (MINUS) ARE SIGNIFICANTLY DIFFERENT FROM CONTROL AT THE 0.05 LEVEL USING KOLMOGOROV-SMIRNOV TWO-TAILED TEST.

Pathology Table 23 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

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INCIDENCE SUMMARY OF MICROSCOPIC OBSERVATIONS(ALL FINDING)

STUDY NUMBER: 2GLP8605

PATHOLOGIST(S): WALKER, HARRY

STUDY START DATE: 10-DEC-86

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

NOTES: ANIMALS = FINAL SACRIFICE

CTLs = CONTROLS FROM GROUP(S): 1

ANIMAL SEX:

DOSE GROUP:

NO. IN GROUP:

-- ANIMALS AFFECTED --

CTLS 2 3 4 5 6

10 10 10 10 10

10 10 10 10 10

PANCREAS ..... NUMBER EXAMINED:

-ACINAR (EXOCRINE) ATROPHY

-CHRONIC INFLAMMATION

PAROTID GLAND ..... NUMBER EXAMINED:

PITUITARY GLAND ..... NUMBER EXAMINED:

-CYST(S)

PARATHYROID ..... NUMBER EXAMINED:

RECTUM ..... NUMBER EXAMINED:

SPINAL CORD ..... NUMBER EXAMINED:

SKIN ..... NUMBER EXAMINED:

SUB-LINGUAL GLND ..... NUMBER EXAMINED:

SKELETAL MUSCLE ..... NUMBER EXAMINED:

SCIATIC NERVE ..... NUMBER EXAMINED:

SOLEUS ..... NUMBER EXAMINED:

-INFLAMMATION, CHRONIC

-INFLAMMATION, ACUTE

-DEGENERATION, FOCAL

-INFLAMMATION, SUBACUTE

SPLEEN ..... NUMBER EXAMINED:

-NECROGRANULOMA

STOMACH ..... NUMBER EXAMINED:

THYROID GLANDS ..... NUMBER EXAMINED:

-CYST

-INFLAMMATION, CHRONIC

NOTE: ENTRIES FLAGGED WITH A - (MINUS) ARE SIGNIFICANTLY DIFFERENT FROM CONTROL AT THE 0.05 LEVEL USING KOLMOGOROV-SMIRNOV TWO-TAILED TEST.

Pathology Table 23 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

PRINTED: 02-FEB-89  
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INCIDENCE SUMMARY OF MICROSCOPIC OBSERVATIONS(ALL FINDING)

STUDY NUMBER: ZGLP8605

PATHOLOGIST(S): WALKER, HARRY

STUDY START DATE: 10-DEC-86

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

NOTES: ANIMALS = FINAL SACRIFICE

CTLS = CONTROLS FROM GROUP(S): 1

ANIMAL SEX:

DOSAGE GROUP:

NO. IN GROUP:

.. ANIMALS AFFECTED ..

.. FEMALES ..

CTLS 2 3 4 5 6

10 10 10 10 10 10

T I S S U E S W I T H F I N D I N G S

THYMUS ..... NUMBER EXAMINED: 10 0 0 0 0 8

-HEMORRHAGE,MULTIFOCAL 1 0 0 0 0 1

TONGUE ..... NUMBER EXAMINED: 10 0 0 0 0 9

-MINERALIZATION,FOCAL 1 0 0 0 0 0

TRACHEA ..... NUMBER EXAMINED: 10 0 0 0 0 10

URINARY BLADDER ..... NUMBER EXAMINED: 9 0 0 0 0 9

UTERUS ..... NUMBER EXAMINED: 9 0 0 0 0 9

-SQUAMOUS METAPLASIA OF THE MUCOSA 1 0 0 0 0 0

-DILATATION OF THE UTERINE LUMEN (HYDROMETRA) 0 0 0 0 0 1

NOTE: ENTRIES FLAGGED WITH A - (MINUS) ARE SIGNIFICANTLY DIFFERENT FROM CONTROL AT THE 0.05 LEVEL USING KOLMOGOROV-SMIRNOV TWO-TAILED TEST.

**Appendix O (cont.): PATHOLOGY**

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
PRESIDIO OF SAN FRANCISCO, CA 94129  
SPECIES: RAT/SPRAGUE-DAWLEY  
INCIDENCE SUMMARY OF MICROSCOPIC OBSERVATIONS(ALL FINDING)  
STUDY NUMBER: 2GLP8605  
PATHOLOGIST(S): WALKER, HARRY  
STUDY START DATE: 10-DEC-86  
STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
PRINTED: 02-FEB-89  
PAGE: 1

NOTES: ANIMALS = INTERIM SACRIFICE 2

[illegible]

ADRENAL	NUMBER EXAMINED:	5	0	0	0	0	5
-CORTICAL MODULAR HYPERTROPHY		0	0	0	0	0	0
-ACCESSORY ADRENAL		0	0	0	0	0	0
AORTA	NUMBER EXAMINED:	5	0	0	0	0	5
BONE, FEMUR	NUMBER EXAMINED:	5	0	0	0	0	5
BRAIN	NUMBER EXAMINED:	5	0	0	0	0	5
BONE, STERNUM	NUMBER EXAMINED:	5	0	0	0	0	5
CECUM	NUMBER EXAMINED:	5	0	0	0	0	5
COLON	NUMBER EXAMINED:	5	0	0	0	0	5
DIAPHRAGM	NUMBER EXAMINED:	5	5	5	5	5	5
-INFLAMMATION,CHRONIC		0	1	0	0	0	0
DUODENUM	NUMBER EXAMINED:	5	0	0	0	0	5
EAR	NUMBER EXAMINED:	5	0	0	0	0	5
EX DIGITORUM LON	NUMBER EXAMINED:	5	5	5	5	5	5
EXORBITAL LACRIM	NUMBER EXAMINED:	5	0	0	0	0	4
-INFLAMMATION,CHRONIC		0	0	0	0	0	1
ESOPHAGUS	NUMBER EXAMINED:	5	0	0	0	0	5
EYES & OPTIC N.	NUMBER EXAMINED:	5	0	0	0	0	5
HARDERIAN GLAND	NUMBER EXAMINED:	5	0	0	0	0	5
-INFLAMMATION,CHRONIC		0	0	0	0	0	0
HEART	NUMBER EXAMINED:	5	0	0	0	0	5

NOTE: ENTRIES FLAGGED WITH A - (MINUS) ARE SIGNIFICANTLY DIFFERENT FROM CONTROL AT THE 0.05 LEVEL USING KOLMOGOROV-SMIRNOV TWO-TAILED TEST.

Pathology Table 24



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

INCIDENCE SUMMARY OF MICROSCOPIC OBSERVATIONS(ALL FINDING)  
 STUDY NUMBER: 2GLP8605  
 PATHOLOGIST(S): WALKER, HARRY  
 STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89  
 PAGE: 2

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

NOTES: ANIMALS = INTERIM SACRIFICE 2		ANIMAL SEX		ANIMALS AFFECTED	
CTLS = CONTROLS FROM GROUP(S): 1		DOSAGE GROUP:		FEMALES	
T I S S U E S   W I T H   F I N D I N G S		NO. IN GROUP:		CTLS	
ILEUM		NUMBER EXAMINED:	5	0	0
JEJUNUM		NUMBER EXAMINED:	5	0	0
KIDNEY		NUMBER EXAMINED:	5	5	5
-INFLAMMATION, CHRONIC			0	1	0
-MINERALIZATION			1	3	2
-NEPHROPATHY			0	0	0
-INFLAMMATION, CHRONIC-ACTIVE, SEROSA			0	0	0
-B-ADENOMA			0	0	0
LIVER		NUMBER EXAMINED:	5	5	5
-INFLAMMATION, CHRONIC, MULTIFOCAL			3	0	2
-FATTY CHANGE, FOCAL			0	0	0
-VACUOLIZATION, FOCAL			0	0	0
LUNGS		NUMBER EXAMINED:	5	5	5
-INFLAMMATION, CHRONIC, FOCAL			0	0	0
-INFLAMMATION, CHRONIC, GRANULOMATOUS			0	0	0
-INFLAMMATION, CHRONIC, PERIVASCULAR			0	1	0
-AGGREGATIONS OF ALVEOLAR MACROPHAGES (HISTIOCYTOSIS)			0	0	0
SUBMANDIBULAR LN		NUMBER EXAMINED:	0	0	0
-HYPERPLASIA, LYMPHOID			0	0	0
MAMMARY GLAND		NUMBER EXAMINED:	3	0	0
MESENTERIC LYM N		NUMBER EXAMINED:	5	0	0
MANDIBULAR GLND		NUMBER EXAMINED:	5	0	0
NOSE/TURBINATES		NUMBER EXAMINED:	5	0	0
OVARIES		NUMBER EXAMINED:	5	1	0
-PARA-OVARIAN CYST(3)			0	1	0

NOTE: ENTRIES FLAGGED WITH A - (MINUS) ARE SIGNIFICANTLY DIFFERENT FROM CONTROL AT THE 0.05 LEVEL USING KOLMOGOROV-SMIRNOV TWO-TAILED TEST.

Pathology Table 24 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

PRINTED: 02-FEB-89  
 PAGE: 3

## INCIDENCE SUMMARY OF MICROSCOPIC OBSERVATIONS(ALL FINDING)

STUDY NUMBER: 2GLP8605

PATHOLOGIST(S): WALKER, HARRY

STUDY START DATE: 10-DEC-86

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

NOTES: ANIMALS = INTERIM SACRIFICE 2

CTLs = CONTROLS FROM GROUP(S): 1

ANIMAL SEX:

DOSAGE GROUP:

NO. IN GROUP:

-- ANIMALS AFFECTED --

-- FEMALES --

CTLs	2	3	4	5	6
5	5	5	5	5	5

T I S S U E S   W I T H   F I N D I N G S

PANCREAS ..... NUMBER EXAMINED:

-ACINAR (EXOCRINE) ATROPHY

-CHRONIC INFLAMMATION

PAROTID GLAND ..... NUMBER EXAMINED:

PITUITARY GLAND ..... NUMBER EXAMINED:

-CYST(S)

PARATHYROID ..... NUMBER EXAMINED:

RECTUM ..... NUMBER EXAMINED:

SPINAL CORD ..... NUMBER EXAMINED:

SKIN ..... NUMBER EXAMINED:

SUB-LINGUAL GLND ..... NUMBER EXAMINED:

SKELETAL MUSCLE ..... NUMBER EXAMINED:

SCIATIC NERVE ..... NUMBER EXAMINED:

SOLEUS ..... NUMBER EXAMINED:

-INFLAMMATION, CHRONIC

-INFLAMMATION, ACUTE

-DEGENERATION, FOCAL

-INFLAMMATION, SUBACUTE

SPLEEN ..... NUMBER EXAMINED:

-NECROGRANULOMA

STOMACH ..... NUMBER EXAMINED:

THYROID GLANDS ..... NUMBER EXAMINED:

-CYST

-INFLAMMATION, CHRONIC

NOTE: ENTRIES FLAGGED WITH A - (MINUS) ARE SIGNIFICANTLY DIFFERENT FROM CONTROL AT THE 0.05 LEVEL USING KOLMOGOROV-SMIRNOV TWO-TAILED TEST.

Pathology Table 24 (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY NUMBER: 2GLP8605  
 PATHOLOGIST(S): WALKER, HARRY  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

PRINTED: 02-FEB-89  
 PAGE: 4

NOTES: ANIMALS = INTERIM SACRIFICE 2

CTLS = CONTROLS FROM GROUP(S): 1

-- ANIMALS AFFECTED --

ANIMAL SEX:  
 DOSAGE GROUP:  
 NO. IN GROUP:

CTLS 2 3 4 5 6  
 5 5 5 5 5

T I S S U E S W I T H F I N D I N G S

THYMUS ..... NUMBER EXAMINED: 5 0 0 0 0 0 5

-HEMORRHAGE, MULTIFOCAL

TONGUE ..... NUMBER EXAMINED: 5 0 0 0 0 0 5

-MINERALIZATION, FOCAL

TRACHEA ..... NUMBER EXAMINED: 5 0 0 0 0 0 5

URINARY BLADDER ..... NUMBER EXAMINED: 5 0 0 0 0 0 5

UTERUS ..... NUMBER EXAMINED: 5 0 0 0 0 0 5

-SQUAMOUS METAPLASIA OF THE MUCOSA

-DILATATION OF THE UTERINE LUMEN (HYDROMETRA)

NOTE: ENTRIES FLAGGED WITH A - (MINUS) ARE SIGNIFICANTLY DIFFERENT FROM CONTROL AT THE 0.05 LEVEL USING KOLMOGOROV-SMIRNOV TWO-TAILED TEST.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

CORRELATION OF GROSS AND MICROSCOPIC FINDINGS  
 STUDY NUMBER: 86005  
 PATHOLOGIST(S): WALKER, HARRY, JOHNSON, TOM  
 SSTUDY START DATE: 04-NOV-86

PRINTED: 18-NOV-88  
 PAGE: 5

ANIMAL NUMBER: 86D0530  
 DATE OF DEATH: 03-FEB-87  
 STUDY DAY OF DEATH: 92  
 SEX: MALE  
 DOSE GROUP: 1  
 STUDY WEEK OF DEATH: 14  
 SACRIFICE STATUS: FINAL SACRIFICE  
 TERMINAL BODY WEIGHT: 550.00 (GMS)

SSTUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ORGAN NAME: LIVER

KEYWORDS / DISTRIBUTION (SEVERITY):

<< PATHOLOGY OBSERVATIONS >>  
 GROSS FREE-TEXT COMMENTS / HISTOPATHOLOGIC FINDINGS

\*GROSS: (MILD) ABNORMAL COLOR  
 1X1CM FOCUS MOSTLY WHITE WITH SOME BLACK SURROUNDED BY  
 CONGESTION IS PRESENT IN ONE LOBE. PROBABLY INJECTION  
 SITE FROM EUTHANASIA SOLUTION.  
 INFLAMMATION, CHRONIC, MULTIFOCAL

\*MICRO: NOT SPECIFIED (TRACE)



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

CORRELATION OF GROSS AND MICROSCOPIC FINDINGS  
 STUDY NUMBER: 86005  
 PATHOLOGIST(S): WALKER, HARRY

PRINTED: 02-FEB-89  
 PAGE: 1

ANIMAL NUMBER: 8600628  
 DATE OF DEATH: 03-FEB-87

SEX: MALE  
 DOSE GROUP: 2  
 SACRIFICE STATUS: FINAL SACRIFICE

STUDY START DATE: 04-NOV-86  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

STUDY WEEK OF DEATH: 14  
 TERMINAL BODY WEIGHT: 414.00 (GMS)

ORGAN NAME      KEYWORDS / DISTRIBUTION (SEVERITY)      OBSERVATIONS      GROSS FREE-TEXT COMMENTS / HISTOPATHOLOGIC FINDINGS

LIVER  
 \*GROSS: (MODERATE) ENLARGED  
 (MILD) DISSEMINATED FOCI  
 \*MICRO: (PRESENT)

LYMPH NODES  
 \*GROSS: HEMORRHAGE(S)  
 \*MICRO: NONE

SPLEEN  
 \*GROSS: ENLARGED (SPLENOEGALY)  
 \*MICRO: (PRESENT)

THE LIVER WAS ABOUT THREE TIMES NORMAL SIZE.  
 MULTIFOCAL AREAS APPEAR TO BE HEMORRHAGES.  
 M- LYMPHOMA / LYMPHOSARCOMA  
 MULTIPLE LYMPH NODES ARE INVOLVED.  
 1X5CM  
 M- LYMPHOMA / LYMPHOSARCOMA

Note: M- LYMPHOMA / LYMPHOSARCOMA WAS DIAGNOSED MICROSCOPICALLY IN THE  
 SUBMANDIBULAR LYMPH NODE OF THIS ANIMAL.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

CORRELATION OF GROSS AND MICROSCOPIC FINDINGS  
 STUDY NUMBER: 86005  
 PATHOLOGIST(S): WALKER, HARRY

PRINTED: 02-FEB-89  
 PAGE: 1

ANIMAL NUMBER: 8600686  
 DATE OF DEATH: 05-FEB-87  
 SEX: MALE  
 DOSE GROUP: 5  
 STUDY WEEK OF DEATH: 14  
 TERMINAL BODY WEIGHT: 495.00 (GMS)

STUDY START DATE: 04-NOV-86  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ORGAN NAME: L Y M P H O M A / L Y M P H O S A R C O M A  
 KEYWORDS / DISTRIBUTION (SEVERITY): ENLARGED  
 \*GROSS: (MODERATE) ENLARGED  
 \*MICRO: NONE

GROSS FREE-TEXT COMMENTS / HISTOPATHOLOGIC FINDINGS  
 THE LEFT SUBMANDIBULAR LN IS ABOUT THREE TIMES NORMAL SIZE.  
 MULTIPLE PETECHIAE ARE ALSO PRESENT IN THIS ORGAN.

Note: M- LYMPHOMA / LYMPHOSARCOMA WAS DIAGNOSED IN THE SUBMANDIBULAR LYMPH  
 NODE OF THIS ANIMAL.

Pathology Annex A (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

CORRELATION OF GROSS AND MICROSCOPIC FINDINGS  
 STUDY NUMBER: 2C1P8605  
 PATHOLOGIST(S): WALKER, HARRY, JOHNSON, TOM  
 STUDY START DATE: 10-DEC-86  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600906  
 DATE OF DEATH: 12-MAR-87  
 SEX: FEMALE  
 DOSE GROUP: 1  
 SACRIFICE STATUS: FINAL SACRIFICE  
 STUDY WEEK OF DEATH: 14  
 TERMINAL BODY WEIGHT: 307.00 (GMS)

ORGAN NAME  
 LIVER

KEYWORDS / DISTRIBUTION (SEVERITY)  
 P A T H O L O G Y O B S E R V A T I O N S >>  
 GROSS FREE-TEXT COMMENTS / HISTOPATHOLOGIC FINDINGS  
 1X5MM LINEAR BACK AREA.

\*GROSS: ABNORMAL COLOR  
 \*MICRO: NONE

PRINTED: 18-NOV-88  
 PAGE: 6



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

CORRELATION OF GROSS AND MICROSCOPIC FINDINGS  
 STUDY NUMBER: 2GLP8605  
 PATHOLOGIST(S): WALKER, HARRY  
 STUDY START DATE: 10-DEC-86

PRINTED: 08-DEC-88  
 PAGE: 1

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600829  
 DATE OF DEATH: 07-JAN-87  
 SEX: FEMALE  
 DOSE GROUP: 2  
 STUDY DAY OF DEATH: 29  
 STUDY WEEK OF DEATH: 5  
 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 TERMINAL BODY WEIGHT: 231.00 (GMS)

ORGAN NAME  
 KEYWORDS / DISTRIBUTION (SEVERITY)

OVARIES

<< PATHOLOGY OBSERVATIONS >>  
 GROSS FREE-TEXT COMMENTS / HISTOPATHOLOGIC FINDINGS

\*GROSS: PARA-OVARIAN CYST(S)  
 \*MICRO: MULTI-FOCAL(MODERATE)

LEFT, 1CM DIAMETER.  
 PARA-OVARIAN CYST(S)

Pathology Annex B (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

CORRELATION OF GROSS AND MICROSCOPIC FINDINGS  
 STUDY NUMBER: 2GLP8605  
 PATHOLOGIST(S): WALKER, HARRY, JOHNSON, TOM  
 STUDY START DATE: 10-DEC-86

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

PRINTED: 18-NOV-88  
 PAGE: 27

ANIMAL NUMBER: 86D0838  
 DATE OF DEATH: 11-MAR-87  
 SEX: FEMALE  
 DOSE GROUP: 2  
 SACRIFICE STATUS: FINAL SACRIFICE  
 STUDY WEEK OF DEATH: 14  
 TERMINAL BODY WEIGHT: 279.00 (GMS)

<< PATHOLOGY OBSERVATIONS >>  
 GROSS FREE-TEXT COMMENTS / HISTOPATHOLOGIC FINDINGS

ORGAN NAME      KEYWORDS / DISTRIBUTION (SEVERITY)

ADRENAL      \*GROSS: (TRACE) GROWTH(S) / MASS(ES)  
              \*MICRO: NONE

3X3MM BROWN NODULE ON THE RIGHT ADRENAL.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAVLEY

CORRELATION OF GROSS AND MICROSCOPIC FINDINGS  
 STUDY NUMBER: 2GLP8605  
 PATHOLOGIST(S): WALKER, HARRY  
 STUDY START DATE: 10-DEC-86

PRINTED: 08-DEC-88  
 PAGE: 1

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600784  
 DATE OF DEATH: 11-MAR-87

SEX: FEMALE  
 DOSE GROUP: 3  
 SACRIFICE STATUS: FINAL SACRIFICE  
 STUDY WEEK OF DEATH: 14  
 TERMINAL BODY WEIGHT: 381.00 (GMS)

ORGAN NAME: SPLEEN

KEYWORDS / DISTRIBUTION (SEVERITY):  
 << PATHOLOGY OBSERVATIONS >>  
 GROSS FREE-TEXT COMMENTS / HISTOPATHOLOGIC FINDINGS

\*GROSS: (MARKED) ENLARGED (SPLENOHEGALY)  
 (MODERATE) FIBROUS ADHESION(S)  
 THE SPLEEN WAS ENLARGED BY A FACTOR OF FOUR.  
 NUMEROUS OMENTAL ADHESIONS ARE WRAPPED AROUND THE SPLEEN  
 AND EXTEND TO THE LEFT KIDNEY.

\*MICRO: MULTI-FOCAL(MODERATE)  
 NECROGRANULOMA

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 .....  
 ANIMAL NUMBER: 8600779  
 DATE OF DEATH: 07-JAN-87    STUDY DAY OF DEATH: 29    SEX: FEMALE    DOSE GROUP: 6    SACR1    E STATUS: INTERIM SACRIFICE 2  
 .....  
 CORRELATION OF GROSS AND MICROSCOPIC FINDINGS  
     STUDY NUMBER: 2GLP8605  
     PATHOLOGIST(S): WALKER, HARRY, JOHNSON, TOM  
     STUDY START DATE: 10-DEC-86    STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
 .....  
 <<    P A T H O L O G Y    O B S E R V A T I O N S    >>  
 .....  
 ORGAN NAME    KEYWORDS / DISTRIBUTION (SEVERITY)    GROSS FREE-TEXT COMMENTS / HISTOPATHOLOGIC FINDINGS  
 .....  
 SKIN    .....  
     \*GROSS: (MILD) ALOPECIA  
     \*MICRO: NONE  
     .....  
     PARTIAL, RIGHT SHOULDER.

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## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 PRESIDIO OF SAN FRANCISCO, CA 94129  
 SPECIES: RAT/SPRAGUE-DAWLEY

CORRELATION OF GROSS AND MICROSCOPIC FINDINGS  
 STUDY NUMBER: 2GLP8605  
 PATHOLOGIST(S): WALKER, HARRY, JOHNSON, TOM  
 STUDY START DATE: 10-DEC-86

PRINTED: 18-NOV-88  
 PAGE: 83

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600798  
 DATE OF DEATH: 11-MAR-87

SEX: FEMALE  
 DOSE GROUP: 6  
 SACRIFICE STATUS: FINAL SACRIFICE  
 STUDY WEEK OF DEATH: 14  
 TERMINAL BODY WEIGHT: 338.00 (GMS)

ORGAN NAME: SKIN

KEYWORDS / DISTRIBUTION (SEVERITY)

<< PATHOLOGY OBSERVATIONS >>  
 GROSS FREE-TEXT COMMENTS / HISTOPATHOLOGIC FINDINGS

\*GROSS: (MODERATE) ALOPECIA  
 \*MICRO: NONE

RT FOREARM 1X3CM WITH SCABS. LT FOREARM 1X2CM NO SCAB.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 04-NOV-86  
 STUDY NUMBER: 86005  
 PRINTED: 02-FEB-89  
 PAGE: 5

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600530/PRETEST= Q8600530 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 03-FEB-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 550.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-FEB-87	92/14	BRAIN	1.932	0.3513 %	1.0000	LOW
03-FEB-87	92/14	LIVER	19.891	3.6165 %	10.2955	OK
03-FEB-87	92/14	KIDNEY	3.046	0.5538 %	1.5766	LOW
03-FEB-87	92/14	HEART	1.362	0.2476 %	0.7050	LOW
03-FEB-87	92/14	SPLEEN	0.688	0.1251 %	0.3561	LOW
03-FEB-87	92/14	ADRENAL	0.036	0.0065 %	0.0186	LOW
03-FEB-87	92/14	TESTES	3.480	0.6327 %	1.8012	LOW

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ABNORMAL COLOR	MILD	1X1CM FOCUS MOSTLY WHITE WITH SOME BLACK SURROUNDED BY CONGESTION IS PRESENT IN ONE LOBE. PROBABLY INJECTION SITE FROM EUTHANASIA SOLUTION.

TISSUE / HISTOPATHOLOGIC FINDINGS	MICROSCOPIC TISSUE	OBSERVATIONS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LUNGS	INFLAMMATION, CHRONIC, PERIVASCULAR	NOT SPECIFIED (TRACE)	
THYMUS	HEMORRHAGE, MULTIFOCAL	NOT SPECIFIED (TRACE)	
LIVER	INFLAMMATION, CHRONIC, MULTIFOCAL	NOT SPECIFIED (TRACE)	
ACCESSORY SEX OR	INFLAMMATION, CHRONIC, PROSTATE	NOT SPECIFIED (TRACE)	
PANCREAS			

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005

STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

PRINTED: 02-FEB-89  
 PAGE: 6

ANIMAL NUMBER: 8600530/PRETEST= 08600530 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 03-FEB-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 550.00 (GMS)

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

PANCREAS ..... NOT SPECIFIED(TRACE)  
 -INFLAMMATION, CHRONIC

EYES & OPTIC N. .... OPTIC NERVE ONLY IS MISSING ON BOTH EYES.

SOLEUS ..... NOT SPECIFIED(TRACE)  
 -INFLAMMATION, CHRONIC

SUBMANDIBULAR LN ..... MISCELLANEOUS TISSUE  
 -HYPERPLASIA, LYMPHOID ..... NOT SPECIFIED(MODERATE)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005  
STUDY START DATE: 04-NOV-86

PRINTED: 02-FEB-89  
PAGE: 9  
STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600539/PRETEST= 08600539 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: FINAL SACRIFICE  
DATE OF DEATH: 03-FEB-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 493.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-FEB-87	92/14	BRAIN	1.854	0.3761 %	1.0000	LOW
03-FEB-87	92/14	LIVER	17.364	3.5221 %	9.3657	OK
03-FEB-87	92/14	KIDNEY	2.826	0.5732 %	1.5243	LOW
03-FEB-87	92/14	HEART	1.455	0.2951 %	0.7848	LOW
03-FEB-87	92/14	SPLEEN	0.779	0.1580 %	0.4202	LOW
03-FEB-87	92/14	ADRENAL	0.063	0.0128 %	0.0340	OK
03-FEB-87	92/14	TESTES	3.128	0.6345 %	1.6872	LOW

<< GROSS ORGAN OBSERVATIONS >>  
KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS

WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

THYROID GLANDS -CYST NOT SPECIFIED(TRACE)

EXORBITAL LACRIM -INFLAMMATION, CHRONIC NOT SPECIFIED(TRACE)

THYMUS -HEMORRHAGE, MULTIFOCAL NOT SPECIFIED(TRACE)

PANCREAS -INFLAMMATION, CHRONIC NOT SPECIFIED(TRACE)



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86  
 PRINTED: 02-FEB-89  
 PAGE: 10  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING  
 ANIMAL NUMBER: 8600539/PRETEST= Q8600539 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 03-FEB-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 493.00 (GMS)  
 << MICROSCOPIC TISSUE OBSERVATIONS >>  
 TISSUE / HISTOPATHOLOGIC FINDINGS  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS  
 MAMMARY GLAND  
 TISSUE IS MISSING  
 EYES & OPTIC N. OPTIC NERVES ONLY ARE MISSING ON BOTH EYES.

Pathology Annex C (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86

PRINTED: 02-FEB-89  
 PAGE: 12

ANIMAL NUMBER: 8600543/PRETEST= Q8600543 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 03-DEC-86 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 423.00 (GMS)

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-DEC-86	30/5	BRAIN	1.999	0.4726 %	1.0000	LOW
03-DEC-86	30/5	LIVER	22.138	5.2336 %	11.0745	HIGH
03-DEC-86	30/5	KIDNEY	2.721	0.6433 %	1.3612	OK
03-DEC-86	30/5	HEART	1.320	0.3121 %	0.6603	OK
03-DEC-86	30/5	SPLEEN	0.866	0.2047 %	0.4332	OK
03-DEC-86	30/5	ADRENAL	0.038	0.0090 %	0.0190	OK
03-DEC-86	30/5	TESTES	2.946	0.6965 %	1.4737	LOW

ORGAN NAME  
 WHOLE BODY

<< GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

HARDERIAN GLAND  
 -INFLAMMATION, CHRONIC

NOT SPECIFIED (TRACE)

MAMMARY GLAND  
 TISSUE IS MISSING

EYES & OPTIC N. OPTIC NERVE IS NOT PRESENT ON A OR B.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY  
STUDY START DATE: 04-NOV-86  
STUDY NUMBER: 86005  
PRINTED: 02-FEB-89  
PAGE: 13  
STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600557/PRETEST= Q8600557 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: FINAL SACRIFICE  
DATE OF DEATH: 03-FEB-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 581.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-FEB-87	92/14	BRAIN	2.069	0.3561 %	1.0000	LOW
03-FEB-87	92/14	LIVER	21.695	3.7341 %	10.4857	OK
03-FEB-87	92/14	KIDNEY	3.603	0.6201 %	1.7414	OK
03-FEB-87	92/14	HEART	1.446	0.2489 %	0.6989	LOW
03-FEB-87	92/14	SPLEEN	0.906	0.1559 %	0.4379	LOW
03-FEB-87	92/14	ADRENAL	0.047	0.0081 %	0.0227	OK
03-FEB-87	92/14	TESTES	3.409	0.5867 %	1.6477	LOW

<< GROSS ORGAN OBSERVATIONS >>  
ORGAN NAME KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

THYROID GLANDS ..... NOT SPECIFIED(TRACE)  
-CYST  
EXORBITAL LACRIM .....  
-INFLAMMATION, CHRONIC ..... NOT SPECIFIED(TRACE)  
KIDNEY .....  
-NEPHROPATHY ..... NOT SPECIFIED(TRACE)  
PANCREAS .....  
-INFLAMMATION, CHRONIC ..... NOT SPECIFIED(TRACE)

Pathology Annex C (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP. PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86

PRINTED: 26-MAR-90  
 PAGE: 1  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600566/PRETEST= 08600566 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 03-FEB-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 593.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-FEB-87	92/14	BRAIN	2.063	0.3479 %	1.0000	LOW
03-FEB-87	92/14	LIVER	18.920	3.1906 %	9.1711	OK
03-FEB-87	92/14	KIDNEY	3.648	0.6152 %	1.7683	OK
03-FEB-87	92/14	HEART	1.584	0.2671 %	0.7678	LOW
03-FEB-87	92/14	SPLEEN	0.620	0.1046 %	0.3005	LOW
03-FEB-87	92/14	ADRENAL	0.052	0.0088 %	0.0252	OK
03-FEB-87	92/14	TESTES	2.728	0.4600 %	1.3223	LOW

ORGAN NAME  
 WHOLE BODY

GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

ACCESSORY SEX OR  
 -INFLAMMATION, CHRONIC, PROSTATE NOT SPECIFIED (TRACE)

PANCREAS  
 -INFLAMMATION, CHRONIC NOT SPECIFIED (TRACE)

SOLEUS  
 -INFLAMMATION, CHRONIC NOT SPECIFIED (TRACE)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 04-NOV-86  
 STUDY NUMBER: 86005  
 PRINTED: 02-FEB-89  
 PAGE: 18  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING  
 ANIMAL NUMBER: 8600577/PRETEST= Q8600577 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 641.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN		1.927	0.3006 %	1.0000	LOW
05-FEB-87	94/14	LIVER		22.835	3.5624 %	11.8500	OK
05-FEB-87	94/14	KIDNEY		3.846	0.6000 %	1.9958	OK
05-FEB-87	94/14	HEART		1.628	0.2540 %	0.8448	LOW
05-FEB-87	94/14	SPLEEN		0.744	0.1161 %	0.3861	LOW
05-FEB-87	94/14	ADRENAL		0.057	0.0089 %	0.0296	OK
05-FEB-87	94/14	TESTES		3.558	0.5551 %	1.8464	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

PARATHYROID ..... TISSUE IS MISSING

LUNGS ..... NOT SPECIFIED (TRACE)  
 -INFLAMMATION, CHRONIC, FOCAL

ACCESSORY SEX OR ..... NOT SPECIFIED (TRACE)  
 -INFLAMMATION, CHRONIC, PROSTATE

PANCREAS ..... NOT SPECIFIED (MILD)  
 -INFLAMMATION, CHRONIC  
 -ACINAR (EXOCRINE) ATROPHY

Pathology Annex C (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 04-NOV-86  
 INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 PRINTED: 02-FEB-89  
 PAGE: 19  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING  
 ANIMAL NUMBER: 8600577/PRETEST= 08600577 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 641 00 (GMS)  
 << MICROSCOPIC TISSUE OBSERVATIONS >>  
 TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS  
 SKIN ..... TISSUE IS MISSING  
 MAMMARY GLAND ..... TISSUE IS MISSING

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86  
 PRINTED: 02-FEB-89  
 PAGE: 25  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600618/PRETEST= 08600618 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 569.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	2.002	0.3518 %	1.0000	LOW
05-FEB-87	94/14	LIVER	17.993	3.1622 %	8.9875	OK
05-FEB-87	94/14	KIDNEY	3.101	0.5450 %	1.5490	LOW
05-FEB-87	94/14	HEART	1.594	0.2801 %	0.7962	LOW
05-FEB-87	94/14	SPLEEN	0.575	0.1011 %	0.2872	LOW
05-FEB-87	94/14	ADRENAL	0.047	0.0083 %	0.0235	OK
05-FEB-87	94/14	TESTES	3.141	0.5520 %	1.5689	LOW

ORGAN NAME  
 WHOLE BODY

GROSS ORGAN OBSERVATIONS  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 THYROID GLANDS  
 -CYST  
 SOLEUS  
 -INFLAMMATION, ACUTE

MICROSCOPIC TISSUE OBSERVATIONS  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

Pathology Annex C (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005  
STUDY START DATE: 04-NOV-86

PRINTED: 13-APR-90  
PAGE: 1

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600620/PRETEST= Q8600620 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2  
DATE OF DEATH: 03-DEC-86 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 396.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-DEC-86	30/5	BRAIN	1.823	0.4604 %	1.0000	LOW
03-DEC-86	30/5	LIVER	17.809	4.4972 %	9.7691	HIGH
03-DEC-86	30/5	KIDNEY	2.560	0.6465 %	1.4043	OK
03-DEC-86	30/5	HEART	1.460	0.3687 %	0.8009	OK
03-DEC-86	30/5	SPLEEN	0.745	0.1881 %	0.4087	LOW
03-DEC-86	30/5	ADRENAL	0.061	0.0154 %	0.0335	OK
03-DEC-86	30/5	TESTES	3.043	0.7684 %	1.6692	LOW

<< GROSS ORGAN OBSERVATIONS >>  
KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
EYES & OPTIC N. ONE EYE NOT PRESENT IN ANIMAL PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

EXORBITAL LACRIM ..... NOT SPECIFIED(TRACE)  
-INFLAMMATION, CHRONIC

ACCESSORY SEX OR ..... ONLY THE EPIDIDYMUS FOR THIS RAT WAS MISSING  
-ATROPHY, PROSTATE NOT SPECIFIED(TRACE)

MAMMARY GLAND ..... TISSUE IS MISSING

EYES & OPTIC N. ..... TISSUE IS MISSING  
ONE EYE WAS NOT PRESENT IN THIS ANIMAL AT THE TIME OF NECROPSY.  
SEE LAIR FORM 54 FOR AN EXPLANATION.  
OPTIC NERVE IS NOT PRESENT ON SLIDE 19A.

SOLEUS .....



# Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH	INDIVIDUAL ANIMAL DATA REPORT	PRINTED: 13-APR-90
DIV OF RES SUPP, PATH SERV GP	STUDY NUMBER: 86005	PAGE: 2
SPECIES: RAT/SPRAGUE-DAWLEY	STUDY START DATE: 04-NOV-86	STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING
ANIMAL NUMBER: 8600620/PRETEST=	Q8600620 SEX: MALE	DOSE GROUP: 1
DATE OF DEATH: 03-DEC-86	STUDY DAY OF DEATH: 30	SACRIFICE STATUS: INTERIM SACRIFICE 2
		STUDY WEEK OF DEATH: 5
		TERMINAL BODY WEIGHT: 396.00 (GMS)
<p>TISSUE / HISTOPATHOLOGIC FINDINGS</p> <p>&lt;&lt; MICROSCOPIC TISSUE OBSERVATIONS &gt;&gt;</p> <p>DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS</p>		
<p>SOLEUS</p> <p>-INFLAMMATION, CHRONIC</p> <p>NOT SPECIFIED (TRACE)</p>		

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005  
STUDY START DATE: 04-NOV-86  
STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

PRINTED: 02-FEB-89  
PAGE: 28

ANIMAL NUMBER: 8600635/PRETEST= 08600635 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: FINAL SACRIFICE  
DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 576.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	2.059	0.3575 %	1.0000	LOW
05-FEB-87	94/14	LIVER	20.004	3.4729 %	9.7154	OK
05-FEB-87	94/14	KIDNEY	2.780	0.4826 %	1.3502	LOW
05-FEB-87	94/14	HEART	1.549	0.2689 %	0.7523	LOW
05-FEB-87	94/14	SPLEEN	0.695	0.1207 %	0.3375	LOW
05-FEB-87	94/14	ADRENAL	0.050	0.0087 %	0.0243	OK
05-FEB-87	94/14	TESTES	3.314	0.5753 %	1.6095	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

HARDERIAN GLAND  
-INFLAMMATION, CHRONIC NOT SPECIFIED (TRACE)

EXORBITAL LACRIM  
-INFLAMMATION, CHRONIC NOT SPECIFIED (TRACE)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005

PRINTED: 02-FEB-89  
PAGE: 33

STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600680/PRETEST= Q8600680 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2  
DATE OF DEATH: 03-DEC-86 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 406.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-DEC-86	30/5	BRAIN	1.945	0.4791 %	1.0000	LOW
03-DEC-86	30/5	LIVER	18.364	4.5232 %	9.4416	HIGH
03-DEC-86	30/5	KIDNEY	3.067	0.7554 %	1.5769	OK
03-DEC-86	30/5	HEART	1.706	0.4202 %	0.8771	OK
03-DEC-86	30/5	SPLEEN	0.698	0.1719 %	0.3589	LOW
03-DEC-86	30/5	ADRENAL	0.051	0.0126 %	0.0262	OK
03-DEC-86	30/5	TESTES	2.859	0.7042 %	1.4699	LOW

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
WHOLE BODY	NO GROSS LESIONS RECOGNIZED.	PRESENT	

TISSUE / HISTOPATHOLOGIC FINDINGS	MICROSCOPIC TISSUE	OBSERVATIONS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
EYES & OPTIC N.		TISSUE IS MISSING	OPTIC NERVES ARE NOT PRESENT ON BOTH EYES.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86

PRINTED: 02-FEB-89  
 PAGE: 34  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600681/PRETEST= Q8600681 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 02-DEC-86 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 368.00 (GHS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
02-DEC-86	29/5	BRAIN	1.972	0.5359 %	1.0000	OK
02-DEC-86	29/5	LIVER	15.707	4.2682 %	7.9650	HIGH
02-DEC-86	29/5	KIDNEY	2.684	0.7293 %	1.3611	OK
02-DEC-86	29/5	HEART	1.245	0.3383 %	0.6313	OK
02-DEC-86	29/5	SPLEEN	0.617	0.1677 %	0.3129	LOW
02-DEC-86	29/5	ADRENAL	0.059	0.0160 %	0.0299	OK
02-DEC-86	29/5	TESTES	2.545	0.6916 %	1.2906	LOW

<< GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

SUB-LINGUAL GLND  
 -HYPERPLASIA, DUCT NOT SPECIFIED(TRACE)

KIDNEY  
 -INFLAMMATION, CHRONIC NOT SPECIFIED(TRACE)

ACCESSORY SEX OR  
 -INFLAMMATION, ACUTE NOT SPECIFIED(TRACE)

EYES & OPTIC N. TISSUE IS MISSING  
 THE OPTIC NERVES ARE NOT PRESENT ON BOTH EYES.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86

PRINTED: 02-FEB-89  
 PAGE: 36

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600688/PRETEST# Q8600688 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 477.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	1.982	0.4155 %	1.0000	LOW
05-FEB-87	94/14	LIVER	15.281	3.2036 %	7.7099	OK
05-FEB-87	94/14	KIDNEY	2.863	0.6002 %	1.4445	OK
05-FEB-87	94/14	HEART	1.562	0.3275 %	0.7881	OK
05-FEB-87	94/14	SPLEEN	0.671	0.1407 %	0.3385	LOW
05-FEB-87	94/14	ADRENAL	0.048	0.0101 %	0.0242	OK
05-FEB-87	94/14	TESTES	2.935	0.6153 %	1.4808	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

HARDERIAN GLAND  
 -INFLAMMATION, CHRONIC NOT SPECIFIED (TRACE)

EXORBITAL LACRIM  
 -INFLAMMATION, CHRONIC NOT SPECIFIED (TRACE)

EYES & OPTIC N. TISSUE IS MISSING  
 OPTIC NERVE ONLY IS MISSING ON 198.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 04-NOV-86  
 STUDY NUMBER: 86005  
 PRINTED: 02-FEB-89  
 PAGE: 38  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600706/PRETEST= Q8600706 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 479.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	1.985	0.4144 %	1.0000	LOW
05-FEB-87	94/14	LIVER	17.447	3.6424 %	8.7894	OK
05-FEB-87	94/14	KIDNEY	3.082	0.6434 %	1.5526	OK
05-FEB-87	94/14	HEART	1.454	0.3035 %	0.7325	OK
05-FEB-87	94/14	SPLEEN	0.623	0.1301 %	0.3139	LOW
05-FEB-87	94/14	ADRENAL	0.043	0.0090 %	0.0217	OK
05-FEB-87	94/14	TESTES	3.209	1.6699 %	1.6166	LOW

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
WHOLE BODY	NO GROSS LESIONS RECOGNIZED.	PRESENT	
TISSUE / HISTOPATHOLOGIC FINDINGS	MICROSCOPIC TISSUE	OBSERVATIONS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
EXORBITAL LACRIM			NOT SPECIFIED(TRACE)
INFLAMMATION, CHRONIC			NOT SPECIFIED(TRACE)
HEART			TISSUE IS MISSING
INFLAMMATION, CHRONIC			TISSUE IS MISSING
MAMMARY GLAND			
EX DIGITORUM LOW			

## Appendix D (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY  
STUDY START DATE: 04-NOV-86  
STUDY NUMBER: 86005  
PRINTED: 02-FEB-89  
PAGE: 39  
STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 86D0707/PRETEST= Q86D0707 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: FINAL SACRIFICE  
DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 524.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	2.116	0.4038 %	1.0000	LOW
05-FEB-87	94/14	LIVER	16.276	3.1061 %	7.6919	OK
05-FEB-87	94/14	KIDNEY	3.046	0.5813 %	1.4395	LOW
05-FEB-87	94/14	HEART	1.939	0.3700 %	0.9164	OK
05-FEB-87	94/14	SPLEEN	0.847	0.1616 %	0.4003	LOW
05-FEB-87	94/14	ADRENAL	0.050	0.0095 %	0.0236	OK
05-FEB-87	94/14	TESTES	3.205	0.6116 %	1.5147	LOW

<< GROSS ORGAN OBSERVATIONS >>  
ORGAN NAME KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

THYMUS ..... TISSUE IS MISSING

ACCESSORY SEX OR ..... NOT SPECIFIED(MILD)  
-INFLAMMATION, CHRONIC, PROSTATE

SOLEUS ..... NOT SPECIFIED(TRACE)  
-INFLAMMATION, CHRONIC

Pathology Annex C (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 ANIMAL NUMBER: 86D0712/PRETEST= Q86D0712 SEX: MALE  
 DATE OF DEATH: 02-DEC-86 STUDY DAY OF DEATH: 29  
 STUDY START DATE: 04-NOV-86  
 STUDY NUMBER: 86005  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING  
 PRINTED: 02-FEB-89  
 PAGE: 41  
 DOSE GROUP: 1  
 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 STUDY WEEK OF DEATH: 5  
 TERMINAL BODY WEIGHT: 382.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
02-DEC-86	29/5	BRAIN	2.032	0.5319 %	1.0000	OK	
02-DEC-86	29/5	LIVER	14.627	3.8291 %	7.1983	OK	
02-DEC-86	29/5	KIDNEY	3.176	0.8314 %	1.5630	OK	
02-DEC-86	29/5	HEART	1.193	0.3123 %	0.5871	OK	
02-DEC-86	29/5	SPLEEN	0.788	0.2063 %	0.3878	OK	
02-DEC-86	29/5	ADRENAL	0.787	0.2060 %	0.3873	HIGH	
02-DEC-86	29/5	TESTES	3.168	0.8293 %	1.5591	HIGH	

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

EXORBITAL LACRIM .....  
 -INFLAMMATION, CHRONIC  
 -ATROPHY

EYES & OPTIC N. .... TISSUE IS MISSING  
 OPTIC NERVE IS MISSING ON BOTH A AND B.



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86

PRINTED: 02-FEB-89  
 PAGE: 46

ANIMAL NUMBER: 8600506/PRETEST= Q8600506 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 02-DEC-86 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 399.00 (GMS)

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
02-DEC-86	29/5	BRAIN	1.857	0.4654 %	1.0000	LOW
02-DEC-86	29/5	LIVER	17.438	4.3704 %	9.3904	HIGH
02-DEC-86	29/5	KIDNEY	3.080	0.7719 %	1.6586	OK
02-DEC-86	29/5	HEART	1.295	0.3246 %	0.6974	OK
02-DEC-86	29/5	SPLEEN	0.736	0.1845 %	0.3963	LOW
02-DEC-86	29/5	ADRENAL	0.061	0.0153 %	0.0328	OK
02-DEC-86	29/5	TESTES	3.064	0.7679 %	1.6500	LOW

ORGAN NAME  
 WHOLE BODY

GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES  
 SEVERITY GROSS FREE-TEXT COMMENTS

NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

LIVER  
 - NECROSIS, FOCAL  
 NOT SPECIFIED (TRACE)

SOLEUS  
 - INFLAMMATION, CHRONIC  
 NOT SPECIFIED (TRACE)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 04-NOV-86  
 STUDY NUMBER: 86005  
 PRINTED: 06-FEB-89  
 PAGE: 1  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600507/PRETEST= Q8600507 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 02-DEC-86 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 424.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
02-DEC-86	29/5	BRAIN	1.978	0.4665 %	1.0000	LOW
02-DEC-86	29/5	LIVER	15.269	3.6012 %	7.7194	OK
02-DEC-86	29/5	KIDNEY	2.959	0.6979 %	1.4960	OK
02-DEC-86	29/5	HEART	1.576	0.3717 %	0.7968	OK
02-DEC-86	29/5	SPLEEN	0.852	0.2009 %	0.4307	OK
02-DEC-86	29/5	ADRENAL	0.068	0.0160 %	0.0344	OK
02-DEC-86	29/5	TESTES	0.066	0.0156 %	0.0334	EXCLUDE

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 04-NOV-86  
 STUDY NUMBER: 86005  
 PRINTED: 02-FEB-89  
 PAGE: 49  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600531/PRETEST= Q8600531 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 03-FEB-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 524.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-FEB-87	92/14	BRAIN	1.996	0.3809 %	1.0000	LOW
03-FEB-87	92/14	LIVER	18.574	3.5447 %	9.3056	OK
03-FEB-87	92/14	KIDNEY	3.266	0.6233 %	1.6363	OK
03-FEB-87	92/14	HEART	1.485	0.2834 %	0.7440	LOW
03-FEB-87	92/14	SPLEEN	0.763	0.1456 %	0.3823	LOW
03-FEB-87	92/14	ADRENAL	0.083	0.0158 %	0.0416	OK
03-FEB-87	92/14	TESTES	3.118	0.5950 %	1.5621	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86

PRINTED: 02-FEB-89  
 PAGE: 50  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600548/PRETEST= 08600548 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 02-DEC-86 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 373.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
02-DEC-86	29/5	BRAIN	1.787	0.4791 %	1.0000	LOW
02-DEC-86	29/5	LIVER	16.138	4.3265 %	9.0308	HIGH
02-DEC-86	29/5	KIDNEY	2.913	0.7810 %	1.6301	OK
02-DEC-86	29/5	HEART	1.429	0.3831 %	0.7997	OK
02-DEC-86	29/5	SPLEEN	0.714	0.1914 %	0.3996	LOW
02-DEC-86	29/5	ADRENAL	0.064	0.0172 %	0.0358	OK
02-DEC-86	29/5	TESTES	0.067	0.0180 %	0.0375	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86

PRINTED: 02-FEB-89  
 PAGE: 54

ANIMAL NUMBER: 8600600/PRETEST= Q8600600 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 03-FEB-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 556.00 (GMS)  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-FEB-87	92/14	BRAIN	2.075	0.3732 %	1.0000	LOW
03-FEB-87	92/14	LIVER	21.319	3.8344 %	10.2742	OK
03-FEB-87	92/14	KIDNEY	3.431	0.6171 %	1.6535	OK
03-FEB-87	92/14	HEART	1.442	0.2594 %	0.6949	LOW
03-FEB-87	92/14	SPLEEN	0.811	0.1459 %	0.3908	LOW
03-FEB-87	92/14	ADRENAL	0.050	0.0090 %	0.0241	OK
03-FEB-87	92/14	TESTES	3.286	0.5910 %	1.5836	LOW

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
WHOLE BODY	NO GROSS LESIONS RECOGNIZED.	PRESENT	

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS

KIDNEY

-INFLAMMATION, CHRONIC

DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NOT SPECIFIED (TRACE)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 04-NOV-86  
 STUDY NUMBER: 86005  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING  
 PRINTED: 02-FEB-89  
 PAGE: 55

ANIMAL NUMBER: 86D0606/PRETEST= Q8600606 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 02-DEC-86 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 388.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
02-DEC-86	29/5	BRAIN	2.105	0.5425 %	1.0000	OK
02-DEC-86	29/5	LIVER	17.279	4.4534 %	8.2086	HIGH
02-DEC-86	29/5	KIDNEY	2.697	0.6951 %	1.2812	OK
02-DEC-86	29/5	HEART	2.117	0.5456 %	1.0057	OK
02-DEC-86	29/5	SPLEEN	0.751	0.1936 %	0.3568	LOW
02-DEC-86	29/5	ADRENAL	0.069	0.0178 %	0.0328	OK
02-DEC-86	29/5	TESTES	2.727	0.7028 %	1.2955	LOW

<< GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS

WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

SOLEUS ..... NOT SPECIFIED (TRACE)  
 -INFLAMMATION, CHRONIC

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005  
STUDY START DATE: 04-NOV-86

PRINTED: 02-FEB-89  
PAGE: 57

ANIMAL NUMBER: 8600625/PRETEST= Q8600625 SEX: MALE  
DATE OF DEATH: 03-FEB-87 STUDY DAY OF DEATH: 92 DOSE GROUP: 2 SACRIFICE STATUS: FINAL SACRIFICE  
STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

TERMINAL BODY WEIGHT: 563.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-FEB-87	92/14	BRAIN	2.251	0.3998 %	1.0000	LOW
03-FEB-87	92/14	LIVER	17.562	3.1194 %	7.8019	OK
03-FEB-87	92/14	KIDNEY	3.124	0.5549 %	1.3878	LOW
03-FEB-87	92/14	HEART	1.680	0.2984 %	0.7463	LOW
03-FEB-87	92/14	SPLEEN	0.835	0.1483 %	0.3709	LOW
03-FEB-87	92/14	ADRENAL	0.046	0.0082 %	0.0204	OK
03-FEB-87	92/14	TESTES	1.882	0.3343 %	0.8361	LOW

<< GROSS ORGAN OBSERVATIONS >>  
KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
ATROPHIC / SMALL, UNILATERALLY MILD RIGHT TESTICLE. 0.7X0.5CM.

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

LUNGS  
- INFLAMMATION, CHRONIC, PERIVASCULAR NOT SPECIFIED (TRACE)

TESTES  
- UNILATERAL ORGAN ATROPHY DIFFUSE (MARKED)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 04-NOV-86  
 STUDY NUMBER: 86005  
 PRINTED: 02-FEB-89  
 PAGE: 58  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING  
 ANIMAL NUMBER: 8600628/PRETEST= Q8600628 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 03-FEB-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 414.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-FEB-87	92/14	BRAIN	2.009	0.4853 %	1.0000	OK
03-FEB-87	92/14	LIVER	69.647	16.8229 %	34.6675	HIGH
03-FEB-87	92/14	KIDNEY	3.691	0.8915 %	1.8372	OK
03-FEB-87	92/14	HEART	1.367	0.3302 %	0.6804	OK
03-FEB-87	92/14	SPLEEN	3.925	0.9481 %	1.9537	HIGH
03-FEB-87	92/14	ADRENAL	0.086	0.0208 %	0.0428	HIGH
03-FEB-87	92/14	TESTES	3.289	0.7944 %	1.6371	LOW

ORGAN NAME	GROSS ORGANS	ORGAN OBSERVATIONS	SEVERITY	GROSS FREE-TEXT COMMENTS
LIVER	ENLARGED	MODERATE		THE LIVER WAS ABOUT THREE TIMES NORMAL SIZE.
LIVER	DISSEMINATED FOCI	MILD		MULTIFOCAL AREAS APPEAR TO BE HEMORRHAGES.
LYMPH NODES	HEMORRHAGE(S)	PRESENT		MULTIPLE LYMPH NODES ARE INVOLVED.
SPLEEN	ENLARGED (SPLENOMEGALY)	PRESENT		1X5CM

TISSUE / HISTOPATHOLOGIC FINDINGS	MICROSCOPIC TISSUE OBSERVATIONS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
SPLEEN		
-M- LYMPHOMA / LYMPHOSARCOMA		(PRESENT)
MESENTERIC LYMN		
-M- LYMPHOMA / LYMPHOSARCOMA		(PRESENT)
LIVER		
-M- LYMPHOMA / LYMPHOSARCOMA		(PRESENT)



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 04-NOV-86  
 STUDY NUMBER: 86005  
 PRINTED: 02-FEB-89  
 PAGE: 59  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600634/PRETEST= Q8600634 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 521.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	2.165	0.4155 %	1.0000	LOW
05-FEB-87	94/14	LIVER	23.246	4.4618 %	10.7372	HIGH
05-FEB-87	94/14	KIDNEY	3.454	0.6630 %	1.5954	OK
05-FEB-87	94/14	HEART	1.632	0.3132 %	0.7538	OK
05-FEB-87	94/14	SPLEEN	0.828	0.1589 %	0.3824	LOW
05-FEB-87	94/14	ADRENAL	0.045	0.0086 %	0.0208	OK
05-FEB-87	94/14	TESTES	3.652	0.7010 %	1.6868	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY ..... NOT SPECIFIED(TRACE)  
 -NEPHROPATHY

SOLEUS ..... NOT SPECIFIED(MILD)  
 -INFLAMMATION, SUBACUTE

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 04-NOV-86  
 STUDY NUMBER: 86005  
 PRINTED: 02-FEB-89  
 PAGE: 61

ANIMAL NUMBER: 8600666/PRETEST= Q8600666 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 518.00 (GMS)  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	2.113	0.4079 %	1.0000	LOW
05-FEB-87	94/14	LIVER	16.077	3.1037 %	7.6086	OK
05-FEB-87	94/14	KIDNEY	3.126	0.6035 %	1.4794	OK
05-FEB-87	94/14	HEART	1.759	0.3396 %	0.8325	OK
05-FEB-87	94/14	SPLEEN	0.606	0.1170 %	0.2868	LOW
05-FEB-87	94/14	ADRENAL	0.049	0.0095 %	0.0232	OK
05-FEB-87	94/14	TESTES	3.134	0.6050 %	1.4832	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

SOLEUS ..... NOT SPECIFIED(TRACE)  
 -INFLAMMATION,CHRONIC

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 04-NOV-86  
 STUDY NUMBER: 86005  
 PRINTED: 02-FEB-89  
 PAGE: 62  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600678/PRETEST= Q8600678 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 546.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	2.128	0.3897 %	1.0000	LOW
05-FEB-87	94/14	LIVER	20.159	3.6921 %	9.4732	OK
05-FEB-87	94/14	KIDNEY	3.148	0.5766 %	1.4793	LOW
05-FEB-87	94/14	HEART	1.415	0.2592 %	0.6649	LOW
05-FEB-87	94/14	SPLEEN	0.733	0.1342 %	0.3445	LOW
05-FEB-87	94/14	ADRENAL	0.051	0.0093 %	0.0240	OK
05-FEB-87	94/14	TESTES	3.181	0.5826 %	1.4948	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005  
STUDY START DATE: 04-NOV-86

PRINTED: 02-FEB-89  
PAGE: 64

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 86D0694/PRETEST= 086D0694 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: FINAL SACRIFICE  
DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 540.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	2.065	0.3824 %	1.0000	LOW
05-FEB-87	94/14	LIVER	17.137	3.1735 %	8.2988	OK
05-FEB-87	94/14	KIDNEY	3.328	0.6163 %	1.6116	OK
05-FEB-87	94/14	HEART	1.574	0.2915 %	0.7622	LOW
05-FEB-87	94/14	SPLEEN	0.613	0.1135 %	0.2969	LOW
05-FEB-87	94/14	ADRENAL	0.043	0.0080 %	0.0208	LOW
05-FEB-87	94/14	TESTES	3.666	0.6789 %	1.7753	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

LUNGS ..... NOT SPECIFIED (TRACE)  
- INFLAMMATION, CHRONIC, FOCAL

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005  
RT DATE: 04-NOV-86

PRINTED: 02-FEB-89  
PAGE: 66

STUDY START DATE: 04-NOV-86  
STUDY TYPE: SUR-CHRONIC/90 DAY FEEDING  
PAGE: 66

ANIMAL NUMBER:	86D0731/PRETEST=	Q86D0731	SEX: MALE	DOSE GROUP: 2	SACRIFICE STATUS: FINAL SACRIFICE
DATE OF DEATH:	05-FEB-87	STUDY DAY OF DEATH:	94	STUDY WEEK OF DEATH:	14
					TERMINAL BODY WEIGHT: 541.00 (GMS)

&lt;&lt; ORGAN WEIGHTS &gt;&gt;

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	1.950	0.3604 %	1.0000	LOW
05-FEB-87	94/14	LIVER	17.993	3.3259 %	9.2272	OK
05-FEB-87	94/14	KIDNEY	3.846	0.7109 %	1.9723	OK
05-FEB-87	94/14	HEART	1.341	0.2479 %	0.6877	LOW
05-FEB-87	94/14	SPLEEN	0.845	0.1562 %	0.4333	LOW
05-FEB-87	94/14	ADRENAL	0.050	0.0092 %	0.0256	OK
05-FEB-87	94/14	TESTES	3.288	0.6078 %	1.6862	LOW

ORGAN NAME	<< GROSS ORGAN	OBSERVATIONS >>	SEVERITY	GROSS FREE-TEXT COMMENTS
KEYWORDS / PHRASES				
WHOLE BODY	NO GROSS LESIONS RECOGNIZED.		PRESENT	

TISSUE / HISTOPATHOLOGIC FINDINGS	<< MICROSCOPIC	TISSUE	OBSERVATIONS >>	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY	.....	
-NEPHROPATHY	.....	NOT SPECIFIED(TRACE)
-DILATION, PELVIS	.....	NOT SPECIFIED(MILD)
.....	.....	
SOLEUS	.....	
-INFLAMMATION,CHRONIC	.....	NOT SPECIFIED(MILD)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86

PRINTED: 02-FEB-89  
 PAGE: 68

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600733/PRETEST= Q8600733 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 02-DEC-86 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 385.00 (GMS)

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
02-DEC-86	29/5	BRAIN	2.127	0.5525 %	1.0000	OK
02-DEC-86	29/5	LIVER	15.761	4.0938 %	7.4100	HIGH
02-DEC-86	29/5	KIDNEY	3.064	0.7958 %	1.4405	OK
02-DEC-86	29/5	HEART	1.321	0.3431 %	0.6211	OK
02-DEC-86	29/5	SPLEEN	0.766	0.1990 %	0.3601	LOW
02-DEC-86	29/5	ADRENAL	0.070	0.0182 %	0.0329	OK
02-DEC-86	29/5	TESTES	3.289	0.8543 %	1.5463	HIGH

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
WHOLE BODY	NO GROSS LESIONS RECOGNIZED.	PRESENT	

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL	

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005

PRINTED: 02-FEB-89  
 PAGE: 69

STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 86D0734/PRETEST= 086D0734 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 523.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	1.944	0.3717 %	1.0000	LOW
05-FEB-87	94/14	LIVER	17.615	3.3681 %	9.0612	OK
05-FEB-87	94/14	KIDNEY	3.008	0.5751 %	1.5473	LOW
05-FEB-87	94/14	HEART	1.511	0.2889 %	0.7773	LOW
05-FEB-87	94/14	SPLEEN	0.903	0.1727 %	0.4645	LOW
05-FEB-87	94/14	ADRENAL	0.052	0.0099 %	0.0267	OK
05-FEB-87	94/14	TESTES	3.377	0.6457 %	1.7371	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS

WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

SOLEUS ..... NOT SPECIFIED(TRACE)  
 -INFLAMMATION, CHRONIC

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86

PRINTED: 02-FEB-89  
 PAGE: 70

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600510/PRETEST= Q8600510 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 02-DEC-86 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 440.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
02-DEC-86	29/5	BRAIN	1.805	0.4102 %	1.0000	LOW
02-DEC-86	29/5	LIVER	19.288	4.3836 %	10.6859	HIGH
02-DEC-86	29/5	KIDNEY	3.051	0.6934 %	1.6903	OK
02-DEC-86	29/5	HEART	1.313	0.2984 %	0.7274	LOW
02-DEC-86	29/5	SPLEEN	0.770	0.1750 %	0.4266	LOW
02-DEC-86	29/5	ADRENAL	0.046	0.0105 %	0.0255	OK
02-DEC-86	29/5	TESTES	3.070	0.6977 %	1.7008	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

LUNGS ..... NOT SPECIFIED (TRACE)  
 - INFLAMMATION, CHRONIC, FOCAL



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005  
STUDY START DATE: 04-NOV-86

PRINTED: 02-FEB-89  
PAGE: 71

ANIMAL NUMBER: 8600511/PRETEST= Q8600511 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: FINAL SACRIFICE  
DATE OF DEATH: 04-FEB-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 531.00 (GMS)  
STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

<< ORGAN WEIGHTS >>

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
04-FEB-87	93/14	BRAIN	1.908	0.3593 %	1.0000	LOW
04-FEB-87	93/14	LIVER	17.255	3.2495 %	9.0435	OK
04-FEB-87	93/14	KIDNEY	2.726	0.5134 %	1.4287	LOW
04-FEB-87	93/14	HEART	1.574	0.2964 %	0.8249	LOW
04-FEB-87	93/14	SPLEEN	0.719	0.1354 %	0.3768	LOW
04-FEB-87	93/14	ADRENAL	0.035	0.0066 %	0.0183	LOW
04-FEB-87	93/14	TESTES	3.115	0.5866 %	1.6326	LOW

<< GROSS ORGAN OBSERVATIONS >>

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
WHOLE BODY	NO GROSS LESIONS RECOGNIZED.	PRESENT	

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

SOLEUS ..... NOT SPECIFIED(TRACE)  
- INFLAMMATION, CHRONIC

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86

PRINTED: 02-FEB-89  
 PAGE: 72  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600520/PRETEST= Q8600520 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 02-DEC-86 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 437.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
02-DEC-86	29/5	BRAIN	2.028	0.4641 %	1.0000	LOW
02-DEC-86	29/5	LIVER	18.728	4.2856 %	9.2347	HIGH
02-DEC-86	29/5	KIDNEY	3.175	0.7265 %	1.5656	OK
02-DEC-86	29/5	HEART	1.430	0.3272 %	0.7051	OK
02-DEC-86	29/5	SPLEEN	0.782	0.1789 %	0.3856	LOW
02-DEC-86	29/5	ADRENAL	0.083	0.0190 %	0.0409	OK
02-DEC-86	29/5	TESTES	3.146	0.7199 %	1.5513	LOW

ORGAN NAME  
 WHOLE BODY

GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

SEVERITY GROSS FREE-TEXT COMMENTS  
 OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86

PRINTED: 02-FEB-89  
 PAGE: 73  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600526/PRETEST= Q8600526 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 04-FEB-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 437.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
04-FEB-87	93/14	BRAIN	2.002	0.4581 %	1.0000	LOW
04-FEB-87	93/14	LIVER	14.652	3.3529 %	7.3187	OK
04-FEB-87	93/14	KIDNEY	2.570	0.5881 %	1.2837	LOW
04-FEB-87	93/14	HEART	1.527	0.3494 %	0.7627	OK
04-FEB-87	93/14	SPLEEN	0.539	0.1233 %	0.2692	LOW
04-FEB-87	93/14	ADRENAL	0.049	0.0112 %	0.0245	OK
04-FEB-87	93/14	TESTES	2.841	0.6501 %	1.4191	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

SOLEUS ..... NOT SPECIFIED(TRACE)  
 -INFLAMMATION,CHRONIC

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 04-NOV-86  
 STUDY NUMBER: 86005  
 PRINTED: 02-FEB-89  
 PAGE: 76

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600544/PRETEST= Q8600544 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 04-FEB-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 542.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
04-FEB-87	93/14	BRAIN	1.814	0.3347 %	1.0000	LOW
04-FEB-87	93/14	LIVER	16.969	3.1308 %	9.3545	OK
04-FEB-87	93/14	KIDNEY	3.556	0.6561 %	1.9603	OK
04-FEB-87	93/14	HEART	1.525	0.2814 %	0.8407	LOW
04-FEB-87	93/14	SPLEEN	0.630	0.1162 %	0.3473	LOW
04-FEB-87	93/14	ADRENAL	0.077	0.0142 %	0.0424	OK
04-FEB-87	93/14	TESTES	2.988	0.5513 %	1.6472	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86  
 PRINTED: 02-FEB-89  
 PAGE: 77  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600553/PRETEST= Q8600553 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 04-FEB-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 609.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN	WEIGHT (GMS)	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
04-FEB-87	93/14	BRAIN	2.076	0.3409 %	1.0000	LOW	
04-FEB-87	93/14	LIVER	21.099	3.4645 %	10.1633	OK	
04-FEB-87	93/14	KIDNEY	3.168	0.5202 %	1.5260	LOW	
04-FEB-87	93/14	HEART	1.436	0.2358 %	0.6917	LOW	
04-FEB-87	93/14	SPLEEN	0.843	0.1384 %	0.4061	LOW	
04-FEB-87	93/14	ADRENAL	0.067	0.0110 %	0.0323	OK	
04-FEB-87	93/14	TESTES	3.626	0.5954 %	1.7466	LOW	

ORGAN NAME  
 WHOLE BODY  
 GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES  
 SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY  
 -INFLAMMATION, CHRONIC  
 NOT SPECIFIED (TRACE)

Pathology Annex C (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005

PRINTED: 02-FEB-89  
 PAGE: 81

STUDY START DATE: 04-NOV-86 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600581/PRETEST= Q8600581 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 04-FEB-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 563.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
04-FEB-87	93/14	BRAIN	2.114	0.3755 %	1.0000	LOW
04-FEB-87	93/14	LIVER	22.364	3.9723 %	10.5790	OK
04-FEB-87	93/14	KIDNEY	3.563	0.6329 %	1.6854	OK
04-FEB-87	93/14	HEART	1.652	0.2934 %	0.7815	LOW
04-FEB-87	93/14	SPLEEN	0.692	0.1229 %	0.3273	LOW
04-FEB-87	93/14	ADRENAL	0.053	0.0094 %	0.0251	OK
04-FEB-87	93/14	TESTES	3.151	0.5597 %	1.4905	LOW

ORGAN NAME  
 WHOLE BODY

<< GROSS ORGAN OBSERVATIONS >>

KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS

NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

LIVER  
 -INFLAMMATION, CHRONIC, MULTIFOCAL NOT SPECIFIED (TRACE)

KIDNEY  
 -NEPHROPATHY NOT SPECIFIED (TRACE)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86  
 PRINTED: 02-FEB-89  
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ANIMAL NUMBER: 8600583/PRETEST= Q8600583 SEX: MALE  
 DOSE GROUP: 3  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

DATE OF DEATH: 04-FEB-87  
 STUDY DAY OF DEATH: 93  
 SACRIFICE STATUS: FINAL SACRIFICE  
 STUDY WEEK OF DEATH: 14  
 TERMINAL BODY WEIGHT: 650.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
04-FEB-87	93/14	BRAIN	1.921	0.2955 %	1.0000	LOW
04-FEB-87	93/14	LIVER	23.430	3.6046 %	12.1968	OK
04-FEB-87	93/14	KIDNEY	4.017	0.6180 %	2.0911	OK
04-FEB-87	93/14	HEART	1.762	0.2711 %	0.9172	LOW
04-FEB-87	93/14	SPLEEN	0.972	0.1495 %	0.5060	LOW
04-FEB-87	93/14	ADRENAL	0.047	0.0072 %	0.0245	LOW
04-FEB-87	93/14	TESTES	3.358	0.5166 %	1.7480	LOW

ORGAN NAME  
 WHOLE BODY

GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005

PRINTED: 02-FEB-89  
PAGE: 83

STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 86D0599/PRETEST= Q86D0599 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 2

DATE OF DEATH: 02-DEC-86 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 369.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
02-DEC-86	29/5	BRAIN	2.013	0.5455 %	1.0000	OK
02-DEC-86	29/5	LIVER	14.861	4.0274 %	7.3825	HIGH
02-DEC-86	29/5	KIDNEY	2.539	0.6881 %	1.2613	OK
02-DEC-86	29/5	HEART	1.366	0.3702 %	0.6786	OK
02-DEC-86	29/5	SPLEEN	0.650	0.1762 %	0.3229	LOW
02-DEC-86	29/5	ADRENAL	0.042	0.0114 %	0.0209	OK
02-DEC-86	29/5	TESTES	2.920	0.7913 %	1.4506	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS

WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL



Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY  
INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005  
STUDY START DATE: 04-NOV-86  
PRINTED: 02-FEB-89  
PAGE: 84  
ANIMAL NUMBER: 8600602/PRETEST= Q8600602 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 2  
DATE OF DEATH: 02-DEC-86 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 360.00 (GMS)  
STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

<< ORGAN WEIGHTS >>				>>	
DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO
02-DEC-86	29/5	BRAIN	1.887	0.5242 %	1.0000
02-DEC-86	29/5	LIVER	14.586	4.0517 %	7.7297
02-DEC-86	29/5	KIDNEY	2.760	0.7667 %	1.4626
02-DEC-86	29/5	HEART	1.273	0.3536 %	0.6746
02-DEC-86	29/5	SPLEEN	0.539	0.1497 %	0.2856
02-DEC-86	29/5	ADRENAL	0.025	0.0069 %	0.0132
02-DEC-86	29/5	TESTES	2.946	0.8183 %	1.5612
					ORGAN STATUS
					OK
					HIGH
					OK
					OK
					LOW
					LOW
					HIGH

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86

PRINTED: 02-FEB-89  
 PAGE: 94

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600696/PRETEST= Q8600696 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 04-FEB-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 507.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	W E I G H T S	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
04-FEB-87	93/14	BRAIN	<< O R G A N W E I G H T S >>	1.828	0.3606 %	1.0000	LOW
04-FEB-87	93/14	LIVER		15.697	3.0961 %	8.5870	OK
04-FEB-87	93/14	KIDNEY		3.154	0.6221 %	1.7254	OK
04-FEB-87	93/14	HEART		1.482	0.2923 %	0.8107	LOW
04-FEB-87	93/14	SPLEEN		0.702	0.1385 %	0.3840	LOW
04-FEB-87	93/14	ADRENAL		0.071	0.0140 %	0.0388	OK
04-FEB-87	93/14	TESTES		3.385	0.6677 %	1.8518	LOW

ORGAN NAME << G R O S S O R G A N O B S E R V A T I O N S >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

SOLEUS ..... NOT SPECIFIED(TRACE)  
 -INFLAMMATION, CHRONIC

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86

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 PAGE: 95

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600698/PRETEST= Q8600698 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 04-FEB-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 524.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
04-FEB-87	93/14	BRAIN	2.060	0.3931 %	1.0000	LOW
04-FEB-87	93/14	LIVER	16.219	3.0952 %	7.8733	OK
04-FEB-87	93/14	KIDNEY	2.948	0.5626 %	1.4311	LOW
04-FEB-87	93/14	HEART	1.465	0.2796 %	0.7112	LOW
04-FEB-87	93/14	SPLEEN	0.712	0.1359 %	0.3456	LOW
04-FEB-87	93/14	ADRENAL	0.071	0.0135 %	0.0345	OK
04-FEB-87	93/14	TESTES	3.305	0.6307 %	1.6044	LOW

ORGAN NAME  
 WHOLE BODY

NO GROSS LESIONS RECOGNIZED.

TISSUE / HISTOPATHOLOGIC FINDINGS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

Pathology Annex C (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAY/SPRAGUE-DAWLEY  
 INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING  
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ANIMAL NUMBER: 8600713/PRETEST= Q8600713 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 02-DEC-86 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 427.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
02-DEC-86	29/5	BRAIN	2.004	0.4693 %	1.0000	LOW
02-DEC-86	29/5	LIVER	20.025	4.6897 %	9.9925	HIGH
02-DEC-86	29/5	KIDNEY	3.062	0.7171 %	1.5279	OK
02-DEC-86	29/5	HEART	1.514	0.3546 %	0.7555	OK
02-DEC-86	29/5	SPLEEN	0.737	0.1726 %	0.3678	LOW
02-DEC-86	29/5	ADRENAL	0.059	0.0138 %	0.0294	OK
02-DEC-86	29/5	TESTES	2.895	0.6780 %	1.4446	LOW

<< GROSS ORGAN OBSERVATIONS >>  
 ORGAN NAME KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

SOLEUS ..... NOT SPECIFIED(TRACE)  
 -INFLAMMATION,CHRONIC

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005

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STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600717/PRETEST= 08600717 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 04-FEB-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 574.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
04-FEB-87	93/14	BRAIN	2.300	0.4007 %	1.0000	LOW
04-FEB-87	93/14	LIVER	20.136	3.5080 %	8.7548	OK
04-FEB-87	93/14	KIDNEY	3.627	0.6319 %	1.5770	OK
04-FEB-87	93/14	HEART	1.588	0.2767 %	0.6904	LOW
04-FEB-87	93/14	SPLEEN	0.766	0.1334 %	0.3330	LOW
04-FEB-87	93/14	ADRENAL	0.043	0.0075 %	0.0187	LOW
04-FEB-87	93/14	TESTES	3.369	0.5869 %	1.4648	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

SOLEUS ..... NOT SPECIFIED(TRACE)  
 -INFLAMMATION,CHRONIC

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86

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STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600723/PRETEST= 08600723 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 04-FEB-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 514.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
04-FEB-87	93/14	BRAIN	1.649	0.3208 %	1.0000	LOW
04-FEB-87	93/14	LIVER	18.426	3.5848 %	11.1740	OK
04-FEB-87	93/14	KIDNEY	3.116	0.6062 %	1.8896	OK
04-FEB-87	93/14	HEART	1.417	0.2757 %	0.8593	LOW
04-FEB-87	93/14	SPLEEN	0.855	0.1663 %	0.5185	LOW
04-FEB-87	93/14	ADRENAL	0.078	0.0152 %	0.0473	OK
04-FEB-87	93/14	TESTES	2.764	0.5377 %	1.6762	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

LIVER ..... NOT SPECIFIED(TRACE)  
 -INFLAMMATION, CHRONIC, MULTIFOCAL

SOLEUS ..... NOT SPECIFIED(TRACE)  
 -INFLAMMATION, CHRONIC

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005

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STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600554/PRETEST= Q86D0554 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: INTERIM SACRIFICE 2  
DATE OF DEATH: 02-DEC-86 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 408.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
02-DEC-86	29/5	BRAIN	1.928	0.4725 %	1.0000	LOW
02-DEC-86	29/5	LIVER	18.454	4.5230 %	9.5716	HIGH
02-DEC-86	29/5	KIDNEY	2.813	0.6895 %	1.4590	OK
02-DEC-86	29/5	HEART	0.522	0.1279 %	0.2707	LOW
02-DEC-86	29/5	SPLEEN	0.692	0.1696 %	0.3589	LOW
02-DEC-86	29/5	ADRENAL	0.057	0.0140 %	0.0296	OK
02-DEC-86	29/5	TESTES	3.562	0.8730 %	1.8475	HIGH

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

US: INTERIM SACRIFICE 2  
AL BODY WEIGHT: 430.00 (GMS)

Pathology Annex C (cont.)



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 ANIMAL NUMBER: 8600604/PRETEST= Q8600604 SEX: MALE  
 DATE OF DEATH: 02-DEC-86 STUDY DAY OF DEATH: 29  
 STUDY START DATE: 04-NOV-86  
 DOSE GROUP: 4  
 STUDY WEEK OF DEATH: 5  
 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 TERMINAL BODY WEIGHT: 425.00 (GMS)  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

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DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
02-DEC-86	29/5	BRAIN	2.001	0.4708 %	1.0000	LOW
02-DEC-86	29/5	LIVER	16.596	3.9049 %	8.2939	OK
02-DEC-86	29/5	KIDNEY	3.399	0.7998 %	1.6987	OK
02-DEC-86	29/5	HEART	1.285	0.3024 %	0.6422	OK
02-DEC-86	29/5	SPLEEN	1.848	0.4348 %	0.9235	HIGH
02-DEC-86	29/5	ADRENAL	0.068	0.0160 %	0.0340	OK
02-DEC-86	29/5	TESTES	3.246	0.7638 %	1.6222	LOW

<< GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

LUNGS ..... NOT SPECIFIED(TRACE)  
 - INFLAMMATION, ACUTE, PERIVASCULAR

DIAPHRAGM ..... NOT SPECIFIED(TRACE)  
 - INFLAMMATION, ACUTE

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005  
STUDY START DATE: 04-NOV-86

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STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600612/PRETEST= Q8600612 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: FINAL SACRIFICE  
DATE OF DEATH: 03-FEB-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 702.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-FEB-87	92/14	BRAIN	2.103	0.2996 %	1.0000	LOW
03-FEB-87	92/14	LIVER	21.381	3.0457 %	10.1669	OK
03-FEB-87	92/14	KIDNEY	3.753	0.5346 %	1.7846	LOW
03-FEB-87	92/14	HEART	1.945	0.2771 %	0.9249	LOW
03-FEB-87	92/14	SPLEEN	0.955	0.1360 %	0.4541	LOW
03-FEB-87	92/14	ADRENAL	0.046	0.0066 %	0.0219	LOW
03-FEB-87	92/14	TESTES	3.926	0.5593 %	1.8669	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

SOLEUS ..... NOT SPECIFIED(TRACE)  
-INFLAMMATION, SUBACUTE

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005  
STUDY START DATE: 04-NOV-86

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ANIMAL NUMBER: 8600626/PRETEST= Q8600626 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: FINAL SACRIFICE  
DATE OF DEATH: 03-FEB-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 561.00 (GMS)

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-FEB-87	92/14	BRAIN	1.986	0.3540 %	1.0000	LOW
03-FEB-87	92/14	LIVER	23.144	4.1255 %	11.6536	HIGH
03-FEB-87	92/14	KIDNEY	3.581	0.6383 %	1.8031	OK
03-FEB-87	92/14	HEART	1.487	0.2651 %	0.7487	LOW
03-FEB-87	92/14	SPLEEN	0.821	0.1463 %	0.4134	LOW
03-FEB-87	92/14	ADRENAL	0.049	0.0087 %	0.0247	OK
03-FEB-87	92/14	TESTES	3.348	0.5968 %	1.6858	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY ..... NOT SPECIFIED(TRACE)  
-NEPHROPATHY

Pathology Annex C (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005  
STUDY START DATE: 04-NOV-86

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STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600636/PRETEST= 08600636 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: FINAL SACRIFICE  
DATE OF DEATH: 03-FEB-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 499.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHT (GMS) >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-FEB-87	92/14	BRAIN	1.897	0.3802 %	1.0000	LOW
03-FEB-87	92/14	LIVER	15.463	3.0988 %	8.1513	OK
03-FEB-87	92/14	KIDNEY	2.941	0.5894 %	1.5503	LOW
03-FEB-87	92/14	HEART	1.451	0.2908 %	0.7649	LOW
03-FEB-87	92/14	SPLEEN	0.653	0.1309 %	0.3442	LOW
03-FEB-87	92/14	ADRENAL	0.049	0.0098 %	0.0258	OK
03-FEB-87	92/14	TESTES	2.672	0.5355 %	1.4085	LOW

<< GROSS ORGAN OBSERVATIONS >>  
ORGAN NAME KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

DIAPHRAGM ..... NOT SPECIFIED (TRACE)  
-INFLAMMATION, SUBACUTE

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86

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ANIMAL NUMBER: 8600639/PRETEST= Q8600639 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 03-FEB-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 552.00 (GMS)

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-FEB-87	92/14	BRAIN	3.748	0.6790 %	1.0000	OK
03-FEB-87	92/14	LIVER	18.762	3.3989 %	5.0059	OK
03-FEB-87	92/14	KIDNEY	3.805	0.6893 %	1.0152	OK
03-FEB-87	92/14	HEART	1.597	0.2893 %	0.4261	LOW
03-FEB-87	92/14	SPLEEN	0.608	0.1101 %	0.1622	LOW
03-FEB-87	92/14	ADRENAL	0.052	0.0094 %	0.0139	OK
03-FEB-87	92/14	TESTES	3.374	0.6112 %	0.9002	LOW

<< GROSS ORGAN OBSERVATIONS >>  
 SEVERITY GROSS FREE-TEXT COMMENTS

ORGAN NAME  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY  
 -NEPHROPATHY NOT SPECIFIED(TRACE)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86

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STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600644/PRETEST= 08600644 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 03-DEC-86 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 385.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-DEC-86	30/5	BRAIN	2.001	0.5197 %	1.0000	OK
03-DEC-86	30/5	LIVER	17.788	4.6203 %	8.8896	HIGH
03-DEC-86	30/5	KIDNEY	2.908	0.7553 %	1.4533	OK
03-DEC-86	30/5	HEART	1.292	0.3356 %	0.6457	OK
03-DEC-86	30/5	SPLEEN	0.826	0.2145 %	0.4128	OK
03-DEC-86	30/5	ADRENAL	0.047	0.0122 %	0.0235	OK
03-DEC-86	30/5	TESTES	3.007	0.7810 %	1.5027	LOW

ORGAN NAME  
 WHOLE BODY

<< GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

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INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005

STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600645/PRETEST= Q8600645 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 03-DEC-86 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 404.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-DEC-86	30/5	BRAIN	1.866	0.4619 %	1.0000	LOW
03-DEC-86	30/5	LIVER	15.781	3.9062 %	8.4571	OK
03-DEC-86	30/5	KIDNEY	2.642	0.6540 %	1.4159	OK
03-DEC-86	30/5	HEART	1.136	0.2812 %	0.6088	LOW
03-DEC-86	30/5	SPLEEN	0.639	0.1582 %	0.3424	LOW
03-DEC-86	30/5	ADRENAL	0.055	0.0136 %	0.0295	OK
03-DEC-86	30/5	TESTES	3.394	0.8401 %	1.8189	HIGH

ORGAN NAME  
 WHOLE BODY

NO GROSS LESIONS RECOGNIZED.

TISSUE / HISTOPATHOLOGIC FINDINGS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

Pathology Annex C (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

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INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005

STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600646/PRETEST= 08600646 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: FINAL SACRIFICE  
DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 572.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	1.936	0.3385 %	1.0000	LOW
05-FEB-87	94/14	LIVER	20.675	3.6145 %	10.6792	OK
05-FEB-87	94/14	KIDNEY	3.334	0.5829 %	1.7221	LOW
05-FEB-87	94/14	HEART	1.597	0.2792 %	0.8249	LOW
05-FEB-87	94/14	SPLEEN	0.955	0.1670 %	0.4933	LOW
05-FEB-87	94/14	ADRENAL	0.085	0.0149 %	0.0439	OK
05-FEB-87	94/14	TESTES	3.152	0.5510 %	1.6281	LOW

<< GROSS ORGAN OBSERVATIONS >>  
ORGAN NAME KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005  
STUDY START DATE: 04-NOV-86

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ANIMAL NUMBER: 8600655/PRETEST= Q8600655 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: FINAL SACRIFICE  
DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 499.00 (GMS)

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	2.012	0.4032 %	1.0000	LOW
05-FEB-87	94/14	LIVER	17.494	3.5058 %	8.6948	OK
05-FEB-87	94/14	KIDNEY	3.089	0.6190 %	1.5353	OK
05-FEB-87	94/14	HEART	1.457	0.2920 %	0.7242	LOW
05-FEB-87	94/14	SPLEEN	0.671	0.1345 %	0.3335	LOW
05-FEB-87	94/14	ADRENAL	0.039	0.0078 %	0.0194	LOW
05-FEB-87	94/14	TESTES	3.102	0.6216 %	1.5417	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86

PRINTED: 02-FEB-89  
 PAGE: 111  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600675/PRETEST= 08600675 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 498.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHT (GMS) >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	2.112	0.4241 %	1.0000	LOW
05-FEB-87	94/14	LIVER	17.446	3.5032 %	8.2604	OK
05-FEB-87	94/14	KIDNEY	2.596	0.5213 %	1.2292	LOW
05-FEB-87	94/14	HEART	1.452	0.2916 %	0.6875	LOW
05-FEB-87	94/14	SPLEEN	0.591	0.1187 %	0.2798	LOW
05-FEB-87	94/14	ADRENAL	0.037	0.0074 %	0.0175	LOW
05-FEB-87	94/14	TESTES	3.754	0.7538 %	1.7775	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 PRINTED: 02-FEB-89  
 PAGE: 112  
 STUDY START DATE: 04-NOV-86  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600676/PRETEST= Q8600676 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 576.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	1.976	0.3431 %	1.0000	LOW
05-FEB-87	94/14	LIVER	19.641	3.4099 %	9.9398	OK
05-FEB-87	94/14	KIDNEY	3.235	0.5616 %	1.6371	LOW
05-FEB-87	94/14	HEART	1.504	0.2611 %	0.7611	LOW
05-FEB-87	94/14	SPLEEN	0.830	0.1441 %	0.4200	LOW
05-FEB-87	94/14	ADRENAL	0.047	0.0082 %	0.0238	OK
05-FEB-87	94/14	TESTES	3.269	0.5675 %	1.6544	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

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INDIVIDUAL ANIMAL DATA REPORT

STUDY NUMBER: 86005

STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600703/PRETEST= Q8600703 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 541.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	2.104	0.3889 %	1.0000	LOW
05-FEB-87	94/14	LIVER	20.877	3.8590 %	9.9225	OK
05-FEB-87	94/14	KIDNEY	3.068	0.5671 %	1.4582	LOW
05-FEB-87	94/14	HEART	1.506	0.2784 %	0.7158	LOW
05-FEB-87	94/14	SPLEEN	0.882	0.1630 %	0.4192	LOW
05-FEB-87	94/14	ADRENAL	0.043	0.0079 %	0.0204	LOW
05-FEB-87	94/14	TESTES	3.464	0.6403 %	1.6464	LOW

<< GROSS ORGAN OBSERVATIONS >>  
 ORGAN NAME SEVERITY GROSS FREE-TEXT COMMENTS

WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86  
 PRINTED: 02-FEB-89  
 PAGE: 114  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600718/PRETEST= Q8600718 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 520.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	1.849	0.3556 %	1.0000	LOW
05-FEB-87	94/14	LIVER	16.595	3.1913 %	8.9751	OK
05-FEB-87	94/14	KIDNEY	2.932	0.5638 %	1.5857	LOW
05-FEB-87	94/14	HEART	1.431	0.2752 %	0.7739	LOW
05-FEB-87	94/14	SPLEEN	0.673	0.1294 %	0.3640	LOW
05-FEB-87	94/14	ADRENAL	0.041	0.0079 %	0.0222	LOW
05-FEB-87	94/14	TESTES	3.718	0.7150 %	2.0108	LOW

ORGAN NAME  
 WHOLE BODY  
 GROSS ORGAN OBSERVATIONS  
 KEYWORDS / PHRASES  
 NO GROSS LESIONS RECOGNIZED.  
 SEVERITY GROSS FREE-TEXT COMMENTS  
 PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 MICROSCOPIC TISSUE OBSERVATIONS  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

SOLEUS  
 -INFLAMMATION, CHRONIC  
 NOT SPECIFIED (TRACE)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005  
STUDY START DATE: 04-NOV-86

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PAGE: 115  
STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600509/PRETEST= 08600509 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: INTERIM SACRIFICE 2  
DATE OF DEATH: 03-DEC-86 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 341.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-DEC-86	30/5		BRAIN	1.932	0.5666 %	1.0000	OK
03-DEC-86	30/5		LIVER	13.415	3.9340 %	6.9436	OK
03-DEC-86	30/5		KIDNEY	2.191	0.6425 %	1.1341	OK
03-DEC-86	30/5		HEART	1.035	0.3035 %	0.5357	OK
03-DEC-86	30/5		SPLEEN	0.860	0.1935 %	0.3416	LOW
03-DEC-86	30/5		ADRENAL	0.034	0.0100 %	0.0176	OK
03-DEC-86	30/5		TESTES	2.586	0.7584 %	1.3385	LOW

ORGAN NAME  
WHOLE BODY

<< GROSS ORGAN OBSERVATIONS >>  
KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
<< MICROSCOPIC TISSUE OBSERVATIONS >>  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, FATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

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INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005

STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600533/PRETEST= 08600533 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 03-DEC-86 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 346.00 (GMS)

DATE	DAY/WEEK OF STUDY	OR C A N	W E I G H T S >> ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-DEC-86	30/5	BRAIN	1.840	0.5318 %	1.0000	OK
03-DEC-86	30/5	LIVER	13.616	3.9353 %	7.4000	OK
03-DEC-86	30/5	KIDNEY	2.477	0.7159 %	1.3462	OK
03-DEC-86	30/5	HEART	1.181	0.3413 %	0.5418	OK
03-DEC-86	30/5	SPLEEN	0.679	0.1962 %	0.3690	LOW
03-DEC-86	30/5	ADRENAL	0.060	0.0173 %	0.0326	OK
03-DEC-86	30/5	TESTES	2.548	0.7364 %	1.3848	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

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INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005

STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600550/PRETEST= Q86D0550 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 03-FEB-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 485.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-FEB-87	92/14	BRAIN	1.914	0.3946 %	1.0000	LOW
03-FEB-87	92/14	LIVER	17.970	3.7052 %	9.3887	OK
03-FEB-87	92/14	KIDNEY	3.168	0.6532 %	1.6552	OK
03-FEB-87	92/14	HEART	1.496	0.3085 %	0.7816	OK
03-FEB-87	92/14	SPLEEN	0.750	0.1546 %	0.3918	LOW
03-FEB-87	92/14	ADRENAL	0.097	0.0200 %	0.0507	HIGH
03-FEB-87	92/14	TESTES	3.111	0.6414 %	1.6254	LOW

ORGAN NAME  
 WHOLE BODY

<< GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 04-NOV-86  
 STUDY NUMBER: 86005  
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ANIMAL NUMBER: 8600570/PRETEST= Q8600570 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 03-FEB-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 621.00 (GMS)  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-FEB-87	92/14	BRAIN	2.089	0.3364 %	1.0000	LOW
03-FEB-87	92/14	LIVER	18.126	2.9188 %	8.6769	LOW
03-FEB-87	92/14	KIDNEY	3.354	0.5401 %	1.6056	LOW
03-FEB-87	92/14	HEART	1.544	0.2486 %	0.7391	LOW
03-FEB-87	92/14	SPLEEN	0.896	0.1443 %	0.4289	LOW
03-FEB-87	92/14	ADRENAL	0.068	0.0110 %	0.0326	OK
03-FEB-87	92/14	TESTES	3.154	0.5079 %	1.5098	LOW

<< GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005

PRINTED: 02-FEB-89  
PAGE: 119

STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600617/PRETEST= Q8600617 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: FINAL SACRIFICE  
DATE OF DEATH: 03-FEB-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 543.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-FEB-87	92/14	BRAIN	1.925	0.3545 %	1.0000	LOW
03-FEB-87	92/14	LIVER	17.641	3.2488 %	9.1642	OK
03-FEB-87	92/14	KIDNEY	3.436	0.6328 %	1.7849	OK
03-FEB-87	92/14	HEART	1.517	0.2794 %	0.7881	LOW
03-FEB-87	92/14	SPLEEN	0.656	0.1208 %	0.3408	LOW
03-FEB-87	92/14	ADRENAL	0.020	0.0037 %	0.0104	LOW
03-FEB-87	92/14	TESTES	3.490	0.6427 %	1.8130	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY ..... NOT SPECIFIED(TRACE)  
-NEPHROPATHY

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86

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 PAGE: 120

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600621/PRETEST= 086D0621 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 03-DEC-86 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 354.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-DEC-86	30/5	BRAIN	1.917	0.5415 %	1.0000	OK
03-DEC-86	30/5	LIVER	16.371	4.6246 %	8.5399	HIGH
03-DEC-86	30/5	KIDNEY	2.688	0.7593 %	1.4022	OK
03-DEC-86	30/5	HEART	1.168	0.3299 %	0.6093	OK
03-DEC-86	30/5	SPLEEN	0.615	0.1737 %	0.3208	LOW
03-DEC-86	30/5	ADRENAL	0.059	0.0167 %	0.0308	OK
03-DEC-86	30/5	TESTES	2.596	0.7333 %	1.3542	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005

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STUDY START DATE: 04-NOV-86 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600632/PRETEST= 08600632 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: FINAL SACRIFICE  
DATE OF DEATH: 03-FEB-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 473.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-FEB-87	92/14	BRAIN	2.048	0.4330 %	1.0000	LOW
03-FEB-87	92/14	LIVER	12.564	2.6562 %	6.1348	LOW
03-FEB-87	92/14	KIDNEY	2.518	0.5323 %	1.2295	LOW
03-FEB-87	92/14	HEART	1.252	0.2647 %	0.6113	LOW
03-FEB-87	92/14	SPLEEN	0.538	0.1137 %	0.2627	LOW
03-FEB-87	92/14	ADRENAL	0.017	0.0036 %	0.0083	LOW
03-FEB-87	92/14	TESTES	2.866	0.6059 %	1.3994	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY ..... NOT SPECIFIED(TRACE)  
- NEPHROPATHY

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY  
STUDY START DATE: 04-NOV-86  
STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING  
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INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005  
DOSE GROUP: 5  
SACRIFICE STATUS: FINAL SACRIFICE  
ANIMAL NUMBER: 8600641/PRETEST= Q8600641 SEX: MALE  
STUDY DAY OF DEATH: 94  
STUDY WEEK OF DEATH: 14  
TERMINAL BODY WEIGHT: 601.00 (GMS)  
DATE OF DEATH: 05-FEB-87

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	2.099	0.3493 %	1.0000	LOW
05-FEB-87	94/14	LIVER	19.159	3.1879 %	9.1277	OK
05-FEB-87	94/14	KIDNEY	3.578	0.5953 %	1.7046	LOW
05-FEB-87	94/14	HEART	1.614	0.2686 %	0.7689	LOW
05-FEB-87	94/14	SPLEEN	0.769	0.1280 %	0.3664	LOW
05-FEB-87	94/14	ADRENAL	0.042	0.0070 %	0.0200	LOW
05-FEB-87	94/14	TESTES	3.326	0.5534 %	1.5846	LOW

ORGAN NAME  
WHOLE BODY  
GROSS ORGAN OBSERVATIONS  
KEYWORDS / PHRASES  
SEVERITY GROSS FREE-TEXT COMMENTS  
NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
MICROSCOPIC TISSUE OBSERVATIONS  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005  
STUDY START DATE: 04-NOV-86  
STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600648/PRETEST= 08600648 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: INTERIM SACRIFICE 2  
DATE OF DEATH: 03-DEC-86 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 399.00 (GMS)

ORGAN WEIGHTS

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-DEC-86	30/5	BRAIN	1.999	0.5010 %	1.0000	OK
03-DEC-86	30/5	LIVER	16.785	4.2068 %	8.3967	HIGH
03-DEC-86	30/5	KIDNEY	2.860	0.7168 %	1.4307	OK
03-DEC-86	30/5	HEART	1.637	0.4103 %	0.8189	OK
03-DEC-86	30/5	SPLEEN	0.735	0.1842 %	0.3677	LOW
03-DEC-86	30/5	ADRENAL	0.069	0.0173 %	0.0345	OK
03-DEC-86	30/5	TESTES	2.729	0.6840 %	1.3652	LOW

NO GROSS LESIONS RECOGNIZED.

GROSS ORGAN OBSERVATIONS

KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS

WHOLE BODY PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS

MICROSCOPIC TISSUE OBSERVATIONS

DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

DIAPHRAGM

INFLAMMATION, CHRONIC

NOT SPECIFIED (TRACE)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

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## INDIVIDUAL ANIMAL DATA REPORT

STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600684/PRETEST= Q8600684 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 497.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	1.988	0.4000 %	1.0000	LOW
05-FEB-87	94/14	LIVER	15.897	3.1986 %	7.9965	OK
05-FEB-87	94/14	KIDNEY	2.932	0.5899 %	1.4748	LOW
05-FEB-87	94/14	HEART	1.314	0.2644 %	0.6610	LOW
05-FEB-87	94/14	SPLEEN	0.727	0.1463 %	0.3657	LOW
05-FEB-87	94/14	ADRENAL	0.039	0.0078 %	0.0196	LOW
05-FEB-87	94/14	TESTES	2.843	0.5720 %	1.4301	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

SOLEUS ..... NOT SPECIFIED (TRACE)  
 INFLAMMATION, CHRONIC

Pathology Annex C (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY  
INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005  
STUDY START DATE: 04-NOV-86  
STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING  
PRINTED: 02-FEB-89  
PAGE: 125

ANIMAL NUMBER: 8600686/PRETEST= Q8600686 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: FINAL SACRIFICE  
DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 495.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	1.860	0.3758 %	1.0000	LOW
05-FEB-87	94/14	LIVER	16.897	3.4135 %	9.0844	OK
05-FEB-87	94/14	KIDNEY	2.980	0.6020 %	1.6022	OK
05-FEB-87	94/14	HEART	1.424	0.2877 %	0.7656	LOW
05-FEB-87	94/14	SPLEEN	0.702	0.1418 %	0.3774	LOW
05-FEB-87	94/14	ADRENAL	0.065	0.0131 %	0.0349	OK
05-FEB-87	94/14	TESTES	2.743	0.5541 %	1.4747	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
LYMPH NODES ENLARGED MODERATE THE LEFT SUBMANDIBULAR LN IS ABOUT THREE TIMES NORMAL SIZE.  
MULTIPLE PETECHIAE ARE ALSO PRESENT IN THIS ORGAN.

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

SOLEUS ..... NOT SPECIFIED (TRACE)

SUBMANDIBULAR LN ..... MISCELLANEOUS TISSUE  
-M- LYMPHOMA / LYMPHOSARCOMA (PRESENT)



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86  
 PRINTED: 02-FEB-89  
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 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600689/PRETEST= 08600689 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 590.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< OR G A N W E I G H T S >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	1.945	0.3297 %	1.0000	LOW
05-FEB-87	94/14	LIVER	22.286	3.7773 %	11.4581	OK
05-FEB-87	94/14	KIDNEY	3.791	0.6425 %	1.9491	OK
05-FEB-87	94/14	HEART	1.509	0.2558 %	0.7758	LOW
05-FEB-87	94/14	SPLEEN	0.964	0.1634 %	0.4956	LOW
05-FEB-87	94/14	ADRENAL	0.047	0.0080 %	0.0242	LOW
05-FEB-87	94/14	TESTES	3.347	0.5673 %	1.7208	LOW

ORGAN NAME  
 WHOLE BODY

<< G R O S S O R G A N O B S E R V A T I O N S >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 << M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 04-NOV-86  
 STUDY NUMBER: 86005  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING  
 PRINTED: 02-FEB-89  
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ANIMAL NUMBER: 8600690/PRETEST= Q8600690 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 550.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	1.759	0.3198 %	1.0000	LOW	
05-FEB-87	94/14	LIVER	18.122	3.2949 %	10.3024	OK	
05-FEB-87	94/14	KIDNEY	3.041	0.5529 %	1.7288	LOW	
05-FEB-87	94/14	HEART	1.273	0.2315 %	0.7237	LOW	
05-FEB-87	94/14	SPLEEN	0.663	0.1205 %	0.3769	LOW	
05-FEB-87	94/14	ADRENAL	0.039	0.0071 %	0.0222	LOW	
05-FEB-87	94/14	TESTES	2.818	0.5124 %	1.6020	LOW	

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005

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STUDY START DATE: 04-NOV-86 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600699/PRETEST= Q86D0699 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 568.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	2.189	0.3854 %	1.0000	LOW
05-FEB-87	94/14	LIVER	17.335	3.0519 %	7.9191	OK
05-FEB-87	94/14	KIDNEY	1.496	0.6155 %	1.5971	OK
05-FEB-87	94/14	HEART	1.356	0.2387 %	0.6195	LOW
05-FEB-87	94/14	SPLEEN	0.862	0.1518 %	0.3938	LOW
05-FEB-87	94/14	ADRENAL	0.051	0.0090 %	0.0233	OK
05-FEB-87	94/14	TESTES	3.132	0.5514 %	1.4308	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY ..... NOT SPECIFIED(MILD)  
 -DILATION, PELVIS

Pathology Annex C (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, 2ATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86

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 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600726/PRETEST= 08600726 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 03-DEC-86 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 424.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-DEC-86	30/5	BRAIN	2.005	0.4729 %	1.0000	LOW
03-DEC-86	30/5	LIVER	18.666	4.4024 %	9.3097	HIGH
03-DEC-86	30/5	KIDNEY	3.069	0.7238 %	1.5307	OK
03-DEC-86	30/5	HEART	1.329	0.3134 %	0.6628	OK
03-DEC-86	30/5	SPLEEN	0.788	0.1858 %	0.3930	LOW
03-DEC-86	30/5	ADRENAL	0.051	0.0120 %	0.0254	OK
03-DEC-86	30/5	TESTES	2.827	0.6667 %	1.4100	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

SOLEUS ..... NOT SPECIFIED(TRACE)  
 -DEGENERATION, FOCAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86  
 PRINTED: 02-FEB-89  
 PAGE: 130

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600523/PRETEST= Q8600523 SEX: MALE DOSE GROUP: 6 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 03-DEC-86 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 326.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-DEC-86	30/5	BRAIN	1.929	0.5917 %	1.0000	OK
03-DEC-86	30/5	LIVER	12.643	3.8782 %	6.5542	OK
03-DEC-86	30/5	KIDNEY	2.344	0.7190 %	1.2151	OK
03-DEC-86	30/5	HEART	1.000	0.3067 %	0.5184	OK
03-DEC-86	30/5	SPLEEN	0.611	0.1874 %	0.3167	LOW
03-DEC-86	30/5	ADRENAL	0.036	0.0110 %	0.0187	OK
03-DEC-86	30/5	TESTES	2.853	0.8752 %	1.4790	HIGH

ORGAN NAME  
 WHOLE BODY  
 NO GROSS LESIONS RECOGNIZED.  
 PRESENT  
 GROSS ORGAN OBSERVATIONS  
 KEYWORDS / PHRASES  
 SEVERITY GROSS FREE-TEXT COMMENTS

TISSUE / HISTOPATHOLOGIC FINDINGS  
 MICROSCOPIC TISSUE OBSERVATIONS  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

DIAPHRAGM  
 -INFLAMMATION, CHRONIC  
 NOT SPECIFIED (TRACE)

Pathology Annex C (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY  
INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005  
STUDY START DATE: 04-NOV-86  
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STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600552/PRETEST= Q8600552 SEX: MALE DOSE GROUP: 6 SACRIFICE STATUS: INTERIM SACRIFICE 2  
DATE OF DEATH: 03-DEC-86 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 329.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-DEC-86	30/5	BRAIN	1.781	0.5413 %	1.0000	OK
03-DEC-86	30/5	LIVER	13.387	4.0690 %	7.5166	HIGH
03-DEC-86	30/5	KIDNEY	2.458	0.7471 %	1.3801	OK
03-DEC-86	30/5	HEART	1.177	0.3578 %	0.6609	OK
03-DEC-86	30/5	SPLEEN	0.600	0.1824 %	0.3369	LOW
03-DEC-86	30/5	ADRENAL	0.041	0.0125 %	0.0230	OK
03-DEC-86	30/5	TESTES	2.706	0.8225 %	1.5194	HIGH

ORGAN NAME  
WHOLE BODY  
GROSS ORGAN OBSERVATIONS  
KEYWORDS / PHRASES  
SEVERITY GROSS FREE-TEXT COMMENTS  
NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
MICROSCOPIC TISSUE OBSERVATIONS  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

ACCESSORY SEX OR  
-ATROPHY, PROSTATE  
NOT SPECIFIED (TRACE)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
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STUDY START DATE: 04-NOV-86  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600563/PRETEST= Q8600563 SEX: MALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 03-FEB-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 571.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-FEB-87	92/14	BRAIN	1.950	0.3415 %	1.0000	LOW
03-FEB-87	92/14	LIVER	20.432	3.5783 %	10.4779	OK
03-FEB-87	92/14	KIDNEY	3.665	0.6419 %	1.8795	OK
03-FEB-87	92/14	HEART	1.606	0.2813 %	0.8236	LOW
03-FEB-87	92/14	SPLEEN	0.793	0.1389 %	0.4067	LOW
03-FEB-87	92/14	ADRENAL	0.079	0.0138 %	0.0405	OK
03-FEB-87	92/14	TESTES	2.907	0.5091 %	1.4908	LOW

ORGAN NAME  
 WHOLE BODY  
 NO GROSS LESIONS RECOGNIZED.  
 PRESENT  
 GROSS ORGAN OBSERVATIONS  
 SEVERITY GROSS FREE-TEXT COMMENTS

TISSUE / HISTOPATHOLOGIC FINDINGS  
 MICROSCOPIC TISSUE OBSERVATIONS  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

PAROTID GLAND  
 -INFLAMMATION, CHRONIC  
 NOT SPECIFIED (TRACE)  
 KIDNEY  
 -INFLAMMATION, CHRONIC  
 NOT SPECIFIED (MILD)  
 PANCREAS  
 -INFLAMMATION, CHRONIC  
 -ACINAR (EXOCRINE) ATROPHY  
 NOT SPECIFIED (MILD)  
 NOT SPECIFIED (MILD)  
 BONE, STERNUM  
 TISSUE IS MISSING

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAVLEY  
 STUDY START DATE: 04-NOV-86  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING  
 PRINTED: 02-FEB-89  
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INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005

ANIMAL NUMBER: 8600565/PRETEST= Q8600565 SEX: MALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 03-FEB-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 508.00 (GMS)

DATE DAY/WEEK OF STUDY ORGAN WEIGHT (GMS) RELATIVE % OF BODY WEIGHT ORGAN TO BRAIN WEIGHT RATIO ORGAN STATUS

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-FEB-87	92/14	BRAIN	1.902	0.3744 %	1.0000	LOW
03-FEB-87	92/14	LIVER	14.910	2.9350 %	7.8391	LOW
03-FEB-87	92/14	KIDNEY	3.188	0.6276 %	1.6761	OK
03-FEB-87	92/14	HEART	1.470	0.2894 %	0.7729	LOW
03-FEB-87	92/14	SPLEEN	0.646	0.1272 %	0.3396	LOW
03-FEB-87	92/14	ADRENAL	0.068	0.0134 %	0.0358	OK
03-FEB-87	92/14	TESTES	2.845	0.5600 %	1.4958	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS

WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

ALL REQUIRED TISSUES NORMAL



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY  
INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005  
STUDY START DATE: 04-NOV-86  
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STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600568/PRETEST= Q86D0568 SEX: MALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE  
DATE OF DEATH: 03-FEB-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 601.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-FEB-87	92/14	BRAIN	2.024	0.3368 %	1.0000	LOW
03-FEB-87	92/14	LIVER	19.644	3.2686 %	9.7055	OK
03-FEB-87	92/14	KIDNEY	3.163	0.5263 %	1.5627	LOW
03-FEB-87	92/14	HEART	1.500	0.2496 %	0.7411	LOW
03-FEB-87	92/14	SPLEEN	0.812	0.1351 %	0.4012	LOW
03-FEB-87	92/14	ADRENAL	0.077	0.0128 %	0.0380	OK
03-FEB-87	92/14	TESTES	3.284	0.5464 %	1.6225	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

EXORBITAL LACRIM ..... NOT SPECIFIED(TRACE)  
-INFLAMMATION, CHRONIC

HEART ..... NOT SPECIFIED(TRACE)  
-INFLAMMATION, CHRONIC

THYRUS ..... NOT SPECIFIED(TRACE)  
-HEMORRHAGE, MULTIFOCAL

ACCESSORY SEX OR ..... NOT SPECIFIED(MILD)  
-INFLAMMATION, CHRONIC, PROSTATE  
-INFLAMMATION, CHRONIC, PREPUTIAL GLAND

PANCREAS .....

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86

PRINTED: 02-FEB-89  
 PAGE: 135

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600568/PRETEST= 08600568 SEX: MALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 03-FEB-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 601.00 (GMS)

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

PANCREAS ..... NOT SPECIFIED(MILD)  
 -ACINAR (EXOCRINE) ATROPHY

PITUITARY GLAND ..... TISSUE IS MISSING

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005

PRINTED: 02-FEB-89  
PAGE: 136

STUDY START DATE: 04-NOV-86 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600587/PRETEST= Q8600587 SEX: MALE DOSE GROUP: 6 SACRIFICE STATUS: INTERIM SACRIFICE 2  
DATE OF DEATH: 03-DEC-86 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 359.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT, RATIO	ORGAN STATUS
03-DEC-86	30/5	BRAIN	1.821	0.5072 %	1.0000	OK
03-DEC-86	30/5	LIVER	13.497	3.7596 %	7.4119	OK
03-DEC-86	30/5	KIDNEY	2.724	0.7588 %	1.4959	OK
03-DEC-86	30/5	HEART	1.329	0.3702 %	0.7298	OK
03-DEC-86	30/5	SPLEEN	0.639	0.1780 %	0.3509	LOW
03-DEC-86	30/5	ADRENAL	0.050	0.0139 %	0.0275	OK
03-DEC-86	30/5	TESTES	2.815	0.7841 %	1.5459	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

EXORBITAL LACRIM ..... TISSUE IS MISSING

HEART ..... NOT SPECIFIED(TRACE)

LUNGS ..... NOT SPECIFIED(TRACE)

MAMMARY GLAND ..... TISSUE IS MISSING

SUBMANDIBULAR LN ..... MISCELLANEOUS TISSUE

-HYPERPLASIA, LYMPHOID ..... NOT SPECIFIED(TRACE)

Pathology Annex C (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005

PRINTED: 02-FEB-89  
 PAGE: 137

STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600607/PRETEST= 08600607 SEX: MALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 03-FEB-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 601.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-FEB-87	92/14	BRAIN	1.905	0.3170 %	1.0000	LOW
03-FEB-87	92/14	LIVER	19.746	3.2855 %	10.3654	OK
03-FEB-87	92/14	KIDNEY	3.424	0.5697 %	1.7974	LOW
03-FEB-87	92/14	HEART	1.574	0.2619 %	0.8262	LOW
03-FEB-87	92/14	SPLEEN	0.678	0.1128 %	0.3559	LOW
03-FEB-87	92/14	ADRENAL	0.099	0.0165 %	0.0520	OK
03-FEB-87	92/14	TESTES	3.300	0.5491 %	1.7323	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

THYROID GLANDS ..... TISSUE IS MISSING  
 PARATHYROID ..... TISSUE IS MISSING  
 LUNGS ..... NOT SPECIFIED(TRACE)  
 -INFLAMMATION, CHRONIC, FOCAL  
 THYMUS ..... NOT SPECIFIED(MILD)  
 -HEMORRHAGE, MULTIFOCAL  
 ACCESSORY SEX OR ..... NOT SPECIFIED(MILD)  
 -INFLAMMATION, CHRONIC, PROSTATE

# Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 04-NOV-86  
 STUDY NUMBER: 86005  
 PRINTED: 02-FEB-89  
 PAGE: 138  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING  
 ANIMAL NUMBER: 8600607/PRETEST= 08600607 SEX: MALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 03-FEB-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 601.00 (GMS)  
 TISSUE / HISTOPATHOLOGIC FINDINGS  
 << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS  
 MAMMARY GLAND ..... TISSUE IS MISSING

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 04-NOV-86  
 STUDY NUMBER: 86005  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING  
 PRINTED: 02-FEB-89  
 PAGE: 139

INDIVIDUAL ANIMAL DATA REPORT  
 ANIMAL NUMBER: 8600630/PRETEST= Q8600630 SEX: MALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 558.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	2.015	0.3611 %	1.0000	LOW
05-FEB-87	94/14	LIVER	18.451	3.3066 %	9.1568	OK
05-FEB-87	94/14	KIDNEY	3.025	0.5421 %	1.5012	LOW
05-FEB-87	94/14	HEART	1.557	0.2790 %	0.7727	LOW
05-FEB-87	94/14	SPLEEN	1.012	0.1814 %	0.5022	LOW
05-FEB-87	94/14	ADRENAL	0.053	0.0095 %	0.0263	OK
05-FEB-87	94/14	TESTES	3.128	0.5606 %	1.5524	LOW

ORGAN NAME  
 WHOLE BODY  
 GROSS ORGAN OBSERVATIONS  
 KEYWORDS / PHRASES  
 SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 MICROSCOPIC TISSUE OBSERVATIONS  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

EXORBITAL LACRIM  
 -INFLAMMATION, CHRONIC  
 NOT SPECIFIED (TRACE)

MAMMARY GLAND  
 TISSUE IS MISSING

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY  
INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005  
STUDY START DATE: 04-NOV-86  
STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING  
PRINTED: 02-FEB-89  
PAGE: 140

ANIMAL NUMBER: 8600631/PRETEST= Q8600631 SEX: MALE DOSE GROUP: 6 SACRIFICE STATUS: INTERIM SACRIFICE 2  
DATE OF DEATH: 03-DEC-86 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 367.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-DEC-86	30/5	BRAIN	1.873	0.5104 %	1.0000	OK
03-DEC-86	30/5	LIVER	15.804	4.3063 %	8.4378	HIGH
03-DEC-86	30/5	KIDNEY	2.454	0.6687 %	1.3102	OK
03-DEC-86	30/5	HEART	1.047	0.2853 %	0.5590	LOW
03-DEC-86	30/5	SPLEEN	0.508	0.1384 %	0.2712	LOW
03-DEC-86	30/5	ADRENAL	0.043	0.0117 %	0.0230	OK
03-DEC-86	30/5	TESTES	3.140	0.8556 %	1.6765	HIGH

ORGAN NAME  
WHOLE BODY  
GROSS ORGAN OBSERVATIONS  
KEYWORDS / PHRASES  
NO GROSS LESIONS RECOGNIZED. PRESENT  
SEVERITY GROSS FREE-TEXT COMMENTS

TISSUE / HISTOPATHOLOGIC FINDINGS  
MICROSCOPIC TISSUE OBSERVATIONS  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

ALL REQUIRED TISSUES NORMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 PRINTED: 02-FEB-89  
 PAGE: 141  
 STUDY START DATE: 04-NOV-86  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING  
 ANIMAL NUMBER: 8600652/PRETEST= 08600652 SEX: MALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 478.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	2.124	0.4444 %	1.0000	LOW
05-FEB-87	94/14	LIVER	17.396	3.6393 %	9.1902	OK
05-FEB-87	94/14	KIDNEY	2.825	0.5910 %	1.3300	LOW
05-FEB-87	94/14	HEART	1.452	0.3038 %	0.6836	OK
05-FEB-87	94/14	SPLEEN	0.715	0.1496 %	0.3366	LOW
05-FEB-87	94/14	ADRENAL	0.049	0.0103 %	0.0231	OK
05-FEB-87	94/14	TESTES	3.394	0.7100 %	1.5979	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

ACCESSORY SEX OR ..... NOT SPECIFIED(MILD)  
 -INFLAMMATION, CHRONIC, PROSTATE  
 PANCREAS ..... NOT SPECIFIED(TRACE)  
 -INFLAMMATION, CHRONIC  
 TONGUE ..... TISSUE IS MISSING  
 EYES & OPTIC N. .... OPTIC NERVE ONLY IS MISSING ON 19A AND B.



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005

PRINTED: 02-FEB-89  
PAGE: 142

STUDY START DATE: 04-NOV-86

STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 86D0659/PRETEST= Q86D0659 SEX: MALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE

DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 478.00 (GMS)

## &lt;&lt; ORGAN WEIGHTS &gt;&gt;

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	1.917	0.4010 %	1.0000	LOW
05-FEB-87	94/14	LIVER	14.438	3.0205 %	7.5316	OK
05-FEB-87	94/14	KIDNEY	2.660	0.5565 %	1.3876	LOW
05-FEB-87	94/14	HEART	1.216	0.2544 %	0.6343	LOW
05-FEB-87	94/14	SPLEEN	0.790	0.1653 %	0.4121	LOW
05-FEB-87	94/14	ADRENAL	0.040	0.0084 %	0.0209	OK
05-FEB-87	94/14	TESTES	3.166	0.6623 %	1.6515	LOW

<< GROSS ORGAN OBSERVATIONS >>  
ORGAN NAME KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

EXORBITAL LACRIM ..... NOT SPECIFIED (TRACE)  
-INFLAMMATION, CHRONIC  
MESENTERIC LYMPH N ..... TISSUE IS MISSING  
RECTUM ..... TISSUE IS MISSING

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 PRINTED: 02-FEB-89  
 PAGE: 143  
 STUDY START DATE: 04-NOV-86  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600674/PRETEST= Q8600674 SEX: MALE DOSE GROUP: 6 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 03-DEC-86 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 359.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
03-DEC-86	30/5	BRAIN	1.934	0.5387 %	1.0000	OK
03-DEC-86	30/5	LIVER	14.818	4.1276 %	7.6618	HIGH
03-DEC-86	30/5	KIDNEY	2.574	0.7170 %	1.3309	OK
03-DEC-86	30/5	HEART	1.184	0.3298 %	0.6122	OK
03-DEC-86	30/5	SPLEEN	0.602	0.1677 %	0.3113	LOW
03-DEC-86	30/5	ADRENAL	0.051	0.0142 %	0.0264	OK
03-DEC-86	30/5	TESTES	2.467	0.6872 %	1.2756	LOW

ORGAN NAME  
 WHOLE BODY  
 GROSS ORGAN OBSERVATIONS  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 MICROSCOPIC TISSUE OBSERVATIONS  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

ACCESSORY SEX OR  
 -INFLAMMATION, CHRONIC, PROSTATE  
 NOT SPECIFIED (MILD)

EAR  
 TISSUE IS MISSING

Pathology Annex C (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 04-NOV-86  
 STUDY NUMBER: 86005  
 PRINTED: 02-FEB-89  
 PAGE: 144  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING  
 ANIMAL NUMBER: 8600679/PRETEST= 08600679 SEX: MALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 578.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	2.123	0.3673 %	1.0000	LOW
05-FEB-87	94/14	LIVER	17.804	3.0803 %	8.3862	OK
05-FEB-87	94/14	KIDNEY	3.833	0.6631 %	1.8055	OK
05-FEB-87	94/14	HEART	1.638	0.2834 %	0.7715	LOW
05-FEB-87	94/14	SPLEEN	0.683	0.1182 %	0.3217	LOW
05-FEB-87	94/14	ADRENAL	0.060	0.0104 %	0.0283	OK
05-FEB-87	94/14	TESTES	3.333	0.5766 %	1.5699	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

THYROID GLANDS ..... NOT SPECIFIED(TRACE)  
 -CYST

EXORBITAL LACRIM .....  
 -INFLAMMATION, CHRONIC ..... NOT SPECIFIED(TRACE)  
 -ATROPHY ..... NOT SPECIFIED(TRACE)

HEART .....  
 -INFLAMMATION, CHRONIC ..... NOT SPECIFIED(MILD)

THYMUS .....  
 -HEMORRHAGE, MULTIFOCAL ..... NOT SPECIFIED(TRACE)

ACCESSORY SEX OR .....

Pathology Annex C (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86

PRINTED: 02-FEB-89  
 PAGE: 145  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 86D0679/PRETEST= 086D0679 SEX: MALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 578.00 (GWS)

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

ACCESSORY SEX OR ..... NOT SPECIFIED(TRACE)  
 -INFLAMMATION, CHRONIC, PROSTATE

SKIN ..... TISSUE IS MISSING

EYES & OPTIC N. .... OPTIC NERVE ONLY IS MISSING ON BOTH A AND B.

MESENTERY ..... MISCELLANEOUS TISSUE  
 -NECROSIS, FAT NOT SPECIFIED(MILD)  
 -INFLAMMATION, ACUTE NOT SPECIFIED(MILD)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY  
INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 86005  
STUDY START DATE: 04-NOV-86  
PRINTED: 13-APR-90  
PAGE: 1

ANIMAL NUMBER: 8600708/PRETEST= Q8600708 SEX: MALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE  
DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 565.00 (GMS)  
STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	1.971	0.3488 %	1.0000	LOW
05-FEB-87	94/14	LIVER	17.103	3.0271 %	8.6773	OK
05-FEB-87	94/14	KIDNEY	3.048	0.5395 %	1.5464	LOW
05-FEB-87	94/14	HEART	1.355	0.2398 %	0.6875	LOW
05-FEB-87	94/14	SPLEEN	0.721	0.1276 %	0.3658	LOW
05-FEB-87	94/14	ADRENAL	0.065	0.0115 %	0.0330	OK
05-FEB-87	94/14	TESTES	3.313	0.5864 %	1.6809	LOW

ORGAN NAME  
WHOLE BODY  
GROSS ORGAN OBSERVATIONS  
KEYWORDS / PHRASES  
NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
MICROSCOPIC TISSUE OBSERVATIONS  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

EXORBITAL LACRIM  
-INFLAMMATION, CHRONIC  
NOT SPECIFIED (TRACE)

PITUITARY GLAND  
TISSUE IS MISSING

DIAPHRAGM  
-INFLAMMATION, SUBACUTE  
NOT SPECIFIED (TRACE)

Pathology Annex C (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 86005  
 STUDY START DATE: 04-NOV-86

PRINTED: 26-MAR-90  
 PAGE: 1  
 STUDY TYPE: SUB-CHRONIC/90 DAY FEEDING

ANIMAL NUMBER: 8600728/PRETEST= 08600728 SEX: MALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 05-FEB-87 STUDY DAY OF DEATH: 94 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 499.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
05-FEB-87	94/14	BRAIN	1.808	0.3623 %	1.0000	LOW
05-FEB-87	94/14	LIVER	16.349	3.2764 %	9.0426	OK
05-FEB-87	94/14	KIDNEY	3.096	0.6204 %	1.7124	OK
05-FEB-87	94/14	HEART	1.347	0.2699 %	0.7450	LOW
05-FEB-87	94/14	SPLEEN	0.665	0.1333 %	0.3678	LOW
05-FEB-87	94/14	ADRENAL	0.068	0.0136 %	0.0376	OK
05-FEB-87	94/14	TESTES	3.229	0.6471 %	1.7860	LOW

ORGAN NAME	GROSS ORGANS	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
WHOLE BODY		NO GROSS LESIONS RECOGNIZED.	PRESENT	

TISSUE / HISTOPATHOLOGIC FINDINGS	MICROSCOPIC TISSUE	OBSERVATIONS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
HEART -INFLAMMATION, CHRONIC			NOT SPECIFIED (TRACE)
THYMUS			TISSUE IS MISSING
PANCREAS -ACINAR (EXOCRINE) ATROPHY			NOT SPECIFIED (TRACE)
MAMMARY GLAND			TISSUE IS MISSING

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY NUMBER: 2GLP8605  
 PRINTED: 02-FEB-89  
 PAGE: 1  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
 ANIMAL NUMBER: 8600765/PRETEST= 08600765 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 276.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.767	0.6402 %	1.0000	OK
07-JAN-87	29/5	LIVER	10.432	3.7797 %	5.9038	OK
07-JAN-87	29/5	KIDNEY	2.177	0.7888 %	1.2320	OK
07-JAN-87	29/5	HEART	0.946	0.3428 %	0.5354	OK
07-JAN-87	29/5	SPLEEN	0.625	0.2264 %	0.3537	OK
07-JAN-87	29/5	ADRENAL	0.097	0.0351 %	0.0549	HIGH
07-JAN-87	29/5	OVARIES	0.186	0.0674 %	0.1053	HIGH

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

LIVER ..... NOT SPECIFIED(MILD)  
 -INFLAMMATION, CHRONIC, MULTIFOCAL  
 KIDNEY ..... NOT SPECIFIED(TRACE)  
 -MINERALIZATION

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 S-ECIES: RAT/SPRAGUE-DAVLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
 PRINTED: 02-FEB-89  
 PAGE: 2

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605

ANIMAL NUMBER: 8600768/PRETEST= Q8600768 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 274.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN		1.662	0.6066 %	1.0000	OK
12-MAR-87	93/14	LIVER		9.319	3.4011 %	5.6071	OK
12-MAR-87	93/14	KIDNEY		1.666	0.6080 %	1.0024	OK
12-MAR-87	93/14	HEART		0.893	0.3259 %	0.5373	OK
12-MAR-87	93/14	SPLEEN		0.374	0.1365 %	0.2250	LOW
12-MAR-87	93/14	ADRENAL		0.074	0.0270 %	0.0445	HIGH
12-MAR-87	93/14	OVARIES		0.100	0.0365 %	0.0602	OK

ORGAN NAME  
 << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS

WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

PANCREAS  
 -ACINAR (EXOCRINE) ATROPHY NOT SPECIFIED(TRACE)

MAMMARY GLAND TISSUE IS MISSING



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 10-DEC-86  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
 PRINTED: 02-FEB-89  
 PAGE: 3

ANIMAL NUMBER: 8600772/PRETEST= 08600772 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 253.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	1.612	0.6372 %	1.0000	OK
12-MAR-87	93/14	LIVER	8.613	3.4043 %	5.3431	OK
12-MAR-87	93/14	KIDNEY	1.483	0.5862 %	0.9200	LOW
12-MAR-87	93/14	HEART	0.787	0.3111 %	0.4882	OK
12-MAR-87	93/14	SPLEEN	0.428	0.1692 %	0.2655	LOW
12-MAR-87	93/14	ADRENAL	0.043	0.0170 %	0.0267	OK
12-MAR-87	93/14	OVARIES	0.088	0.0348 %	0.0546	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY ..... NOT SPECIFIED(TRACE)

PANCREAS ..... NOT SPECIFIED(TRACE)

TONGUE ..... NOT SPECIFIED(TRACE)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89  
 PAGE: 4  
 STUDY TYPE: SUB-CHRONIC/190 DAY FEEDING

ANIMAL NUMBER: 86D0776/PRETEST= Q86D0776 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 261.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	1.890	0.7241 %	1.0000	OK
12-MAR-87	93/14	LIVER	8.119	3.1107 %	4.2958	OK
12-MAR-87	93/14	KIDNEY	1.771	0.6785 %	0.9370	OK
12-MAR-87	93/14	HEART	0.858	0.3287 %	0.4540	OK
12-MAR-87	93/14	SPLEEN	0.437	0.1674 %	0.2312	LOW
12-MAR-87	93/14	ADRENAL	0.068	0.0261 %	0.0360	HIGH
12-MAR-87	93/14	OVARIES	0.148	0.0567 %	0.0783	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS

WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY ..... NOT SPECIFIED(MILD)  
 -MINERALIZATION

OVARIES ..... NOT SPECIFIED(TRACE)  
 -PARA-OVARIAN CYST(S)

MAMMARY GLAND ..... TISSUE IS MISSING

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 2GLP8605  
STUDY START DATE: 10-DEC-86  
STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

PRINTED: 02-FEB-89  
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ANIMAL NUMBER: 86D0778/PRETEST= Q86D0778 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: FINAL SACRIFICE  
DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 308.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	1.880	0.6104 %	1.0000	OK
12-MAR-87	93/14	LIVER	10.895	3.5373 %	5.7952	OK
12-MAR-87	93/14	KIDNEY	1.768	0.5740 %	0.9404	LOW
12-MAR-87	93/14	HEART	0.964	0.3130 %	0.5128	OK
12-MAR-87	93/14	SPLEEN	0.528	0.1714 %	0.2809	LOW
12-MAR-87	93/14	ADRENAL	0.085	0.0276 %	0.0452	HIGH
12-MAR-87	93/14	OVARIES	0.135	0.0438 %	0.0718	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

LIVER ..... NOT SPECIFIED(TRACE)  
-INFLAMMATION,CHRONIC,MULTIFOCAL  
EYES & OPTIC N. .... OPTIC NERVE ONLY IS MISSING ON BOTH EYES.

Pathology Annex D (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

## INDIVIDUAL ANIMAL DATA REPORT

STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89

PAGE: 6

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 860806/PRETEST= 0860806 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 307.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	1.476	0.4808 %	1.0000	OK
12-MAR-87	93/14	LIVER	13.102	4.2678 %	8.8767	HIGH
12-MAR-87	93/14	KIDNEY	2.118	0.6899 %	1.4350	OK
12-MAR-87	93/14	HEART	1.083	0.3528 %	0.7337	OK
12-MAR-87	93/14	SPLEEN	0.503	0.1638 %	0.3408	LOW
12-MAR-87	93/14	ADRENAL	0.072	0.0235 %	0.0488	HIGH
12-MAR-87	93/14	OVARIES	0.078	0.0254 %	0.0528	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 LIVER ABNORMAL COLOR PRESENT 1X5MM LINEAR BLACK AREA.

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

THYMUS ..... NOT SPECIFIED(TRACE)

KIDNEY ..... NOT SPECIFIED(TRACE)

UTERUS ..... NOT SPECIFIED(MILD)

SKIN ..... TISSUE IS MISSING

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89  
 PAGE: 7

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600806/PRETEST= Q8600806 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 307.00 (GMS)

<< MICROSCOPIC TISSUE OBSERVATIONS >>

TISSUE / HISTOPATHOLOGIC FINDINGS  
 ..... DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS .....

MAMMARY GLAND ..... TISSUE IS MISSING

DIAPHRAGM ..... TISSUE IS MISSING

Pathology Annex D (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89  
 PAGE: 8

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 800810/PRETEST= Q8600810 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 306.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	1.885	0.6160 %	1.0000	OK
12-MAR-87	93/14	LIVER	13.343	4.3005 %	7.0785	HIGH
12-MAR-87	93/14	KIDNEY	2.356	0.7699 %	1.2499	OK
12-MAR-87	93/14	HEART	1.078	0.3523 %	0.5719	OK
12-MAR-87	93/14	SPLEEN	0.654	0.2137 %	0.3469	OK
12-MAR-87	93/14	ADRENAL	0.069	0.0225 %	0.0366	HIGH
12-MAR-87	93/14	OVARIES	0.090	0.0294 %	0.0477	LOW

<< GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

ADRENAL ..... TISSUE IS MISSING  
 SOLEUS ..... NOT SPECIFIED(TRACE)  
 -INFLAMMATION, CHRONIC  
 SUBMANDIBULAR LN ..... MISCELLANEOUS TISSUE  
 -HYPERPLASIA, LYMPHOID ..... NOT SPECIFIED(MILD)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 2GLP8605  
STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89  
PAGE: 9

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600814/PRETEST= 08600814 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2  
DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 242.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.335	0.5517 %	1.0000	OK
07-JAN-87	29/5	LIVER	9.680	4.0000 %	7.2509	HIGH
07-JAN-87	29/5	KIDNEY	1.694	0.7000 %	1.2689	OK
07-JAN-87	29/5	HEART	0.735	0.3037 %	0.5506	OK
07-JAN-87	29/5	SPLEEN	0.544	0.2248 %	0.4075	OK
07-JAN-87	29/5	ADRENAL	0.080	0.0331 %	0.0599	HIGH
07-JAN-87	29/5	OVARIES	0.162	0.0669 %	0.1213	HIGH

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

THYROID GLANDS ..... NOT SPECIFIED(TRACE)  
-CYST

PARATHYROID ..... TISSUE IS MISSING

LIVER ..... NOT SPECIFIED(TRACE)  
-INFLAMMATION, CHRONIC, MULTIFOCAL

MAMMARY GLAND ..... TISSUE IS MISSING

Pathology Annex D (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT

STUDY NUMBER: 2GLP8605

STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89

PAGE: 10

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600815/PRETEST= Q8600815 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 252.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.826	0.7246 %	1.0000	OK
07-JAN-87	29/5	LIVER	9.596	3.8079 %	5.2552	OK
07-JAN-87	29/5	KIDNEY	1.657	0.6575 %	0.9074	OK
07-JAN-87	29/5	HEART	0.879	0.3488 %	0.4814	OK
07-JAN-87	29/5	SPLEEN	0.537	0.2131 %	0.2941	OK
07-JAN-87	29/5	ADRENAL	0.074	0.0294 %	0.0405	HIGH
07-JAN-87	29/5	OVARIES	0.134	0.0532 %	0.0734	OK

<< GROSS ORGAN OBSERVATIONS >>  
 ORGAN NAME KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

THYROID GLANDS  
 -CYST NOT SPECIFIED(TRACE)

PARATHYROID TISSUE IS MISSING

LIVER  
 -INFLAMMATION, CHRONIC, MULTIFOCAL NOT SPECIFIED(TRACE)

PANCREAS  
 -CHRONIC INFLAMMATION NOT SPECIFIED(TRACE)



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605

PRINTED: 02-FEB-89  
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STUDY START DATE: 10-DEC-86

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600818/PRETEST= 08600818 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 302.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	1.793	0.5937 %	1.0000	OK
12-MAR-87	93/14	LIVER	9.142	3.0272 %	5.0987	OK
12-MAR-87	93/14	KIDNEY	2.122	0.7026 %	1.1835	OK
12-MAR-87	93/14	HEART	1.067	0.3533 %	0.5951	OK
12-MAR-87	93/14	SPLEEN	0.503	0.1666 %	0.2805	LOW
12-MAR-87	93/14	ADRENAL	0.084	0.0278 %	0.0468	HIGH
12-MAR-87	93/14	OVARIES	0.114	0.0377 %	0.0636	OK

<< GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

LIVER  
 - INFLAMMATION, CHRONIC, MULTIFOCAL  
 - FATTY CHANGE, FOCAL  
 NOT SPECIFIED (TRACE)  
 NOT SPECIFIED (TRACE)

URINARY BLADDER  
 TISSUE IS MISSING

UTERUS  
 TISSUE IS MISSING

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

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INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605

STUDY START DATE: 10-DEC-86

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 86D0825/PRETEST= 08600825 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 241.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.707	0.7083 %	1.0000	OK
07-JAN-87	29/5	LIVER	8.559	3.5515 %	5.0141	OK
07-JAN-87	29/5	KIDNEY	1.875	0.7780 %	1.0984	OK
07-JAN-87	29/5	HEART	0.940	0.3900 %	0.5507	OK
07-JAN-87	29/5	SPLEEN	0.560	0.2324 %	0.3281	OK
07-JAN-87	29/5	ADRENAL	0.117	0.0485 %	0.0685	HIGH
07-JAN-87	29/5	OVARIES	0.169	0.0701 %	0.0990	HIGH

<< GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

THYROID GLANDS ..... NOT SPECIFIED (TRACE)

MAMMARY GLAND ..... TISSUE IS MISSING

EYES & OPTIC N. .... OPTIC NERVE ONLY IS MISSING ON BOTH EYES.

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 10-DEC-86  
 PRINTED: 02-FEB-89  
 PAGE: 13  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 86D0832/PRETEST= Q86D0832 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 246.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.831	0.7443 %	1.0000	OK
07-JAN-87	29/5	LIVER	9.954	4.0463 %	5.4364	HIGH
07-JAN-87	29/5	KIDNEY	1.901	0.7728 %	1.0382	OK
07-JAN-87	29/5	HEART	1.070	0.4350 %	0.5844	OK
07-JAN-87	29/5	SPLEEN	0.645	0.2622 %	0.3523	OK
07-JAN-87	29/5	ADRENAL	0.081	0.0329 %	0.0442	HIGH
07-JAN-87	29/5	OVARIES	0.147	0.0598 %	0.0803	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

ALL REQUIRED TISSUES NORMAL

Pathology Annex D (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 10-DEC-86

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 PAGE: 14  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600833/PRETEST= Q8600833 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 311.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	2.017	0.6486 %	1.0000	OK
12-MAR-87	93/14	LIVER	10.295	3.3103 %	5.1041	OK
12-MAR-87	93/14	KIDNEY	2.038	0.6553 %	1.0104	OK
12-MAR-87	93/14	HEART	1.092	0.3511 %	0.5414	OK
12-MAR-87	93/14	SPLEEN	0.539	0.1733 %	0.2672	LOW
12-MAR-87	93/14	ADRENAL	0.081	0.0260 %	0.0402	HIGH
12-MAR-87	93/14	OVARIES	0.148	0.0476 %	0.0734	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

ALL REQUIRED TISSUES NORMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 2GLP8605

PRINTED: 02-FEB-89  
PAGE: 15

STUDY START DATE: 10-DEC-86

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 86D0843/PRETEST= 086D0843 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: FINAL SACRIFICE

DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 352.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	1.891	0.5372 %	1.0000	OK
12-MAR-87	93/14	LIVER	12.154	3.4528 %	6.4273	OK
12-MAR-87	93/14	KIDNEY	2.274	0.6460 %	1.2025	OK
12-MAR-87	93/14	HEART	1.115	0.3168 %	0.5896	OK
12-MAR-87	93/14	SPLEEN	0.663	0.1884 %	0.3506	LOW
12-MAR-87	93/14	ADRENAL	0.097	0.0276 %	0.0513	HIGH
12-MAR-87	93/14	OVARIES	0.115	0.0327 %	0.0608	LOW

<< GROSS ORGAN OBSERVATIONS >>  
ORGAN NAME KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

EXORBITAL LACRIM ..... NOT SPECIFIED(TRACE)  
-INFLAMMATION,CHRONIC  
KIDNEY ..... NOT SPECIFIED(TRACE)  
-MINERALIZATION  
PITUITARY GLAND ..... TISSUE IS MISSING  
EYES & OPTIC N. .... OPTIC NERVE ONLY IS MISSING ON BOTH EYES.  
EAR ..... TISSUE IS MISSING

Pathology Annex D (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY NUMBER: 2GLP8605  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
 PRINTED: 02-FEB-89  
 PAGE: 16

INDIVIDUAL ANIMAL DATA REPORT  
 ANIMAL NUMBER: 8600849/PRETEST= Q8600849 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 293.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	2.019	0.6891 %	1.0000	OK
12-MAR-87	93/14	LIVER	12.574	4.2915 %	6.2278	HIGH
12-MAR-87	93/14	KIDNEY	2.202	0.7515 %	1.0906	OK
12-MAR-87	93/14	HEART	1.192	0.4068 %	0.5904	OK
12-MAR-87	93/14	SPLEEN	0.580	0.1980 %	0.2873	LOW
12-MAR-87	93/14	ADRENAL	0.085	0.0290 %	0.0421	HIGH
12-MAR-87	93/14	OVARIES	0.130	0.0444 %	0.0644	OK

ORGAN NAME  
 KEYWORDS / PHRASES  
 NO GROSS LESIONS RECOGNIZED.  
 PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 THYROID GLANDS  
 -CYST  
 EXORBITAL LACRIM  
 -INFLAMMATION, CHRONIC  
 KIDNEY  
 -INFLAMMATION, CHRONIC  
 PITUITARY GLAND  
 -CYST(S)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 PRINTED: 02-FEB-89  
 PAGE: 17  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600849/PRETEST= Q8600849 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 293.00 (GMS)

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 TISSUE / HISTOPATHOLOGIC FINDINGS  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

EAR ..... TISSUE IS MISSING

SOLEUS ..... NOT SPECIFIED (TRACE)  
 -INFLAMMATION, CHRONIC

SUBMANDIBULAR LN ..... MISCELLANEOUS TISSUE  
 -HYPERPLASIA, LYMPHOID ..... NOT SPECIFIED (MILD)

Pathology Annex D (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 10-DEC-86  
 PRINTED: 02-FEB-89  
 PAGE: 18  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600752/PRETEST= Q8600752 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 289.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	1.811	0.6266 %	1.0000	OK
11-MAR-87	92/14	LIVER	10.968	3.7952 %	6.0563	OK
11-MAR-87	92/14	KIDNEY	1.857	0.6426 %	1.0254	OK
11-MAR-87	92/14	HEART	1.018	0.3522 %	0.5621	OK
11-MAR-87	92/14	SPLEEN	0.619	0.2142 %	0.3418	OK
11-MAR-87	92/14	ADRENAL	0.066	0.0228 %	0.0364	HIGH
11-MAR-87	92/14	OVARIES	0.155	0.0536 %	0.0856	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89  
 PAGE: 19

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600755/PRETEST= Q8600755 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 291.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORG. WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	1.665	0.5722 %	1.0000	OK
11-MAR-87	92/14	LIVER	10.090	3.4674 %	6.0601	OK
11-MAR-87	92/14	KIDNEY	1.946	0.6687 %	1.1688	OK
11-MAR-87	92/14	HEART	0.983	0.3378 %	0.5904	OK
11-MAR-87	92/14	SPLEEN	0.493	0.1694 %	0.2961	LOW
11-MAR-87	92/14	ADRENAL	0.085	0.0292 %	0.0511	HIGH
11-MAR-87	92/14	OVARIES	0.161	0.0553 %	0.0967	OK

ORGAN NAME  
 WHOLE BODY

<< GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89  
 PAGE: 20

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600758/PRETEST= Q8600758 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 325.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	2.058	0.6332 %	1.0000	OK
07-JAN-87	29/5	LIVER	13.492	4.1514 %	6.5559	HIGH
07-JAN-87	29/5	KIDNEY	2.144	0.6597 %	1.0418	OK
07-JAN-87	29/5	HEART	1.047	0.3222 %	0.5087	OK
07-JAN-87	29/5	SPLEEN	0.555	0.1708 %	0.2697	LOW
07-JAN-87	29/5	ADRENAL	0.074	0.0228 %	0.0360	HIGH
07-JAN-87	29/5	OVARIES	0.098	0.0302 %	0.0476	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY ..... NOT SPECIFIED(TRACE)  
 -MINERALIZATION

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 2GLP8605  
STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89  
PAGE: 21  
STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600764/PRETEST= Q86D0764 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: FINAL SACRIFICE  
DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 337.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	1.745	0.5178 %	1.0000	OK
11-MAR-87	92/14	LIVER	12.480	3.7033 %	7.1519	OK
11-MAR-87	92/14	KIDNEY	1.887	0.5599 %	1.0814	LOW
11-MAR-87	92/14	HEART	1.166	0.3460 %	0.6682	OK
11-MAR-87	92/14	SPLEEN	0.633	0.1878 %	0.3628	LOW
11-MAR-87	92/14	ADRENAL	0.086	0.0255 %	0.0493	HIGH
11-MAR-87	92/14	OVARIES	0.090	0.0267 %	0.0516	LOW

ORGAN NAME  
WHOLE BODY

GROSS ORGAN OBSERVATIONS >>  
KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
<< MICROSCOPIC TISSUE OBSERVATIONS >>  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY NUMBER: 2GLP8605  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
 PRINTED: 02-FEB-89  
 PAGE: 22

INDIVIDUAL ANIMAL DATA REPORT  
 ANIMAL NUMBER: 8600774 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 361.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	ORGAN NAME	ABSOLUTE WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	2.015	0.5582 %	1.0000	OK	
11-MAR-87	92/14	LIVER	14.988	4.1518 %	7.4382	HIGH	
11-MAR-87	92/14	KIDNEY	2.473	0.6850 %	1.2273	OK	
11-MAR-87	92/14	HEART	1.378	0.3817 %	0.6839	OK	
11-MAR-87	92/14	SPLEEN	0.575	0.1593 %	0.2854	LOW	
11-MAR-87	92/14	ADRENAL	0.135	0.0374 %	0.0670	HIGH	
11-MAR-87	92/14	OVARIES	0.182	0.0504 %	0.0903	OK	

<< GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY ..... NOT SPECIFIED(TRACE)  
 -MINERALIZATION

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 10-DEC-86  
 PRINTED: 02-FEB-89  
 PAGE: 23  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600781/PRETEST= 08600781 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 277.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.861	0.6718 %	1.0000	OK
07-JAN-87	29/5	LIVER	10.757	3.8834 %	5.7802	OK
07-JAN-87	29/5	KIDNEY	1.757	0.6343 %	0.9441	OK
07-JAN-87	29/5	HEART	0.968	0.3495 %	0.5202	OK
07-JAN-87	29/5	SPLEEN	0.569	0.2054 %	0.3057	OK
07-JAN-87	29/5	ADRENAL	0.072	0.0260 %	0.0387	HIGH
07-JAN-87	29/5	OVARIES	0.160	0.0578 %	0.0860	OK

ORGAN NAME	<< GROSS ORGAN OBSERVATIONS >>
WHOLE BODY	KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS	<< MICROSCOPIC TISSUE OBSERVATIONS >>
DIAPHRAGM	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NOT SPECIFIED(TRACE)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89  
 PAGE: 24  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600795/PRETEST= Q8600795 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 428.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHT (GMS) >>	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN 2.073	0.4843 %	1.0000	OK
11-MAR-87	92/14	LIVER 15.758	3.6818 %	7.5015	OK
11-MAR-87	92/14	KIDNEY 2.672	0.6243 %	1.2890	OK
11-MAR-87	92/14	HEART 1.153	0.2694 %	0.5562	LOW
11-MAR-87	92/14	SPLEEN 0.619	0.1446 %	0.2986	LOW
11-MAR-87	92/14	ADRENAL 0.075	0.0175 %	0.0362	OK
11-MAR-87	92/14	OVARIES 0.200	0.0467 %	0.0965	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY  
STUDY START DATE: 10-DEC-86  
STUDY NUMBER: 2GLP8605  
PRINTED: 02-FEB-89  
PAGE: 25  
STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 86D0799/PRETEST= Q86D0799 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 2  
DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 249.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.783	0.7161 %	1.0000	OK
07-JAN-87	29/5	LIVER	8.433	3.3867 %	4.7297	OK
07-JAN-87	29/5	KIDNEY	1.832	0.7357 %	1.0275	OK
07-JAN-87	29/5	HEART	0.964	0.3871 %	0.5407	OK
07-JAN-87	29/5	SPLEEN	0.663	0.2663 %	0.3718	OK
07-JAN-87	29/5	ADRENAL	0.088	0.0353 %	0.0494	HIGH
07-JAN-87	29/5	OVARIES	0.194	0.0779 %	0.1088	HIGH

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

LUNGS ..... NOT SPECIFIED(TRACE)

KIDNEY ..... NOT SPECIFIED(TRACE)  
-INFLAMMATION, CHRONIC, PERIVASCULAR  
-INFLAMMATION, CHRONIC  
-MINERALIZATION

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

PRINTED: 02-FEB-89

PAGE: 26

INDIVIDUAL ANIMAL DATA REPORT

STUDY NUMBER: 2GLP8605

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

STUDY START DATE: 10-DEC-86

ANIMAL NUMBER: 8600804/PRETEST= Q8600804 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 346.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHT (GMS) >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	1.811	0.5234 %	1.0000	OK
11-MAR-87	92/14	LIVER	11.490	3.3208 %	6.3446	OK
11-MAR-87	92/14	KIDNEY	2.112	0.6104 %	1.1662	OK
11-MAR-87	92/14	HEART	1.033	0.2986 %	0.5704	LOW
11-MAR-87	92/14	SPLEEN	0.469	0.1355 %	0.2590	LOW
11-MAR-87	92/14	ADRENAL	0.098	0.0283 %	0.0541	HIGH
11-MAR-87	92/14	OVARIES	0.138	0.0399 %	0.0762	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS

WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

LUNGS ..... NOT SPECIFIED(TRACE)  
 -INFLAMMATION, CHRONIC, GRANULOMATOUS



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY NUMBER: 26LP8605  
 PRINTED: 02-FEB-89  
 PAGE: 27  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600829/PRETEST= Q8600829 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 231.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.804	0.7810 %	1.0000	OK
07-JAN-87	29/5	LIVER	9.134	3.9541 %	5.0632	OK
07-JAN-87	29/5	KIDNEY	1.773	0.7675 %	0.9828	OK
07-JAN-87	29/5	HEART	0.680	0.2944 %	0.3769	LOW
07-JAN-87	29/5	SPLEEN	0.464	0.2009 %	0.2572	OK
07-JAN-87	29/5	ADRENAL	0.054	0.0234 %	0.0299	HIGH
07-JAN-87	29/5	OVARIES	0.254	0.1100 %	0.1408	HIGH

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 OVARIES PARA-OVARIAN CYST(S) PRESENT LEFT, 1CM DIAMETER.

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY ..... NOT SPECIFIED(TRACE)  
 -MINERALIZATION

OVARIES ..... MULTI-FOCAL(MODERATE)  
 -PARA-OVARIAN CYST(S)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAVLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 10-DEC-86

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ANIMAL NUMBER: 8600837/PRETEST= Q8600837 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 245.00 (GMS)

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.670	0.6816 %	1.0000	OK
07-JAN-87	29/5	LIVER	7.688	3.1380 %	4.6036	OK
07-JAN-87	29/5	KIDNEY	1.602	0.6539 %	0.9593	OK
07-JAN-87	29/5	HEART	0.906	0.3698 %	0.5425	OK
07-JAN-87	29/5	SPLEEN	0.568	0.2318 %	0.3401	OK
07-JAN-87	29/5	ADRENAL	0.075	0.0306 %	0.0449	HIGH
07-JAN-87	29/5	OVARIES	0.174	0.0710 %	0.1042	HIGH

<< GROSS ORGAN OBSERVATIONS >>  
 ORGAN NAME KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
 PRINTED: 02-FEB-89  
 PAGE: 29

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 ANIMAL NUMBER: 86D0838/TEST= Q86D0838 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 279.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	1.820	0.6523 %	1.0000	OK
11-MAR-87	92/14	LIVER	8.523	3.0548 %	4.6830	OK
11-MAR-87	92/14	KIDNEY	1.811	0.6491 %	0.9951	OK
11-MAR-87	92/14	HEART	1.016	0.3642 %	0.5282	OK
11-MAR-87	92/14	SPLEEN	0.571	0.2047 %	0.3137	OK
11-MAR-87	92/14	ADRENAL	0.069	0.0247 %	0.0379	HIGH
11-MAR-87	92/14	OVARIES	0.123	0.0441 %	0.0676	OK

ORGAN NAME	<< GROSS ORGAN OBSERVATIONS >>	SEVERITY	GROSS FREE-TEXT COMMENTS
ADRENAL	KEYWORDS / PHRASES	TRACE	3X3MM BROWN NODULE ON THE RIGHT ADRENAL.

TISSUE / HISTOPATHOLOGIC FINDINGS	<< MICROSCOPIC TISSUE OBSERVATIONS >>	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
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KIDNEY ..... NOT SPECIFIED(TRACE)  
 MINERALIZATION

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY NUMBER: 2GLP8605  
 INDIVIDUAL ANIMAL DATA REPORT  
 PRINTED: 02-FEB-89  
 PAGE: 30

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600840/PRETEST= Q8600840 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 395.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHT (GMS) >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	1.872	0.4739 %	1.0000	LOW
11-MAR-87	92/14	LIVER	13.763	3.4843 %	7.3520	OK
11-MAR-87	92/14	KIDNEY	2.561	0.6484 %	1.3681	OK
11-MAR-87	92/14	HEART	1.104	0.2795 %	0.5897	LOW
11-MAR-87	92/14	SPLEEN	0.829	0.2099 %	0.4428	OK
11-MAR-87	92/14	ADRENAL	0.082	0.0208 %	0.0438	HIGH
11-MAR-87	92/14	OVARIES	0.191	0.0484 %	0.1020	OK

<< GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

LIVER ..... NOT SPECIFIED(TRACE)  
 -INFLAMMATION, CHRONIC, MULTIFOCAL

KIDNEY ..... NOT SPECIFIED(TRACE)  
 -MINERALIZATION

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY NUMBER: 2GLP8605  
 PRINTED: 02-FEB-89  
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ANIMAL NUMBER: 86D0850/PRETEST= Q86D0850 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 295.00 (GMS)  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	1.802	0.6108 %	1.0000	OK
11-MAR-87	92/14	LIVER	10.033	3.4010 %	5.5677	OK
11-MAR-87	92/14	KIDNEY	1.677	0.5685 %	0.9306	LOW
11-MAR-87	92/14	HEART	0.931	0.3156 %	0.5166	OK
11-MAR-87	92/14	SPLEEN	0.550	0.1864 %	0.3052	LOW
11-MAR-87	92/14	ADRENAL	0.068	0.0231 %	0.0377	HIGH
11-MAR-87	92/14	OVARIES	0.122	0.0414 %	0.0677	OK

ORGAN NAME  
 WHOLE BODY  
 GROSS ORGAN OBSERVATIONS  
 KEYWORDS / PHRASES  
 SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 MICROSCOPIC TISSUE OBSERVATIONS  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89  
 PAGE: 32  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600855/PRETEST= 08600855 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 331.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHT (GMS) >>	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	1.810	0.5468 %	1.0000	OK
11-MAR-87	92/14	9.722	2.9372 %	5.3713	LOW
11-MAR-87	92/14	2.075	0.6269 %	1.1464	OK
11-MAR-87	92/14	0.945	0.2855 %	0.5221	LOW
11-MAR-87	92/14	0.647	0.1955 %	0.3575	LOW
11-MAR-87	92/14	0.097	0.0293 %	0.0536	HIGH
11-MAR-87	92/14	0.193	0.0583 %	0.1066	OK

<< GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP. PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 10-DEC-86  
 PRINTED: 02-FEB-89  
 PAGE: 33  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 86D0749/PRETEST= 086D0749 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 278.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	2.022	0.7273 %	1.0000	OK
11-MAR-87	92/14	LIVER	9.830	3.5360 %	4.8615	OK
11-MAR-87	92/14	KIDNEY	1.827	0.6572 %	0.9036	OK
11-MAR-87	92/14	HEART	0.849	0.3054 %	0.4199	OK
11-MAR-87	92/14	SPLEEN	0.490	0.1763 %	0.2423	LOW
11-MAR-87	92/14	ADRENAL	0.045	0.0162 %	0.0223	OK
11-MAR-87	92/14	OVARIES	0.109	0.0392 %	0.0539	OK

ORGAN NAME  
 WHOLE BODY  
 NO GROSS LESIONS RECOGNIZED.

TISSUE / HISTOPATHOLOGIC FINDINGS  
 OBSERVATIONS  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

LIVER  
 -INFLAMMATION, CHRONIC, MULTIFOCAL  
 NOT SPECIFIED (TRACE)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 26LP8605  
 STUDY START DATE: 10-DEC-86  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
 PRINTED: 02-FEB-89  
 PAGE: 34

ANIMAL NUMBER: 8600751/PRETEST= Q8600751 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 339.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< OR G A N W E I G H T S >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	1.820	0.5369 %	1.0000	OK
11-MAR-87	92/14	LIVER	11.592	3.4195 %	6.3692	OK
11-MAR-87	92/14	KIDNEY	2.313	0.6823 %	1.2709	OK
11-MAR-87	92/14	HEART	1.191	0.3513 %	0.6544	OK
11-MAR-87	92/14	SPLEEN	0.800	0.2360 %	0.4396	OK
11-MAR-87	92/14	ADRENAL	0.088	0.0260 %	0.0484	HIGH
11-MAR-87	92/14	OVARIES	0.163	0.0481 %	0.0896	OK

ORGAN NAME	<< G R O S S K E Y W O R D S / P H R A S E S >>	ORGAN OBSERVATIONS	SEVERITY	GROSS FREE-TEXT COMMENTS
WHOLE BODY	NO GROSS LESIONS RECOGNIZED.	PRESENT		

TISSUE / HISTOPATHOLOGIC FINDINGS	<< M I C R O S C O P I C T I S S U E D I S T R I B U T I O N (SEVERITY) / SPECIAL COMMENTS >>
KIDNEY	NOT SPECIFIED(MILD)



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89  
 PAGE: 35

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600753/PRETEST= 08600753 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 315.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	1.885	0.5984 %	1.0000	OK
11-MAR-87	92/14	LIVER	9.416	2.9892 %	4.9952	LOW
11-MAR-87	92/14	KIDNEY	1.785	0.5667 %	0.9469	LOW
11-MAR-87	92/14	HEART	0.898	0.2851 %	0.4764	LOW
11-MAR-87	92/14	SPLEEN	0.460	0.1460 %	0.2440	LOW
11-MAR-87	92/14	ADRENAL	0.058	0.0184 %	0.0308	OK
11-MAR-87	92/14	OVARIES	0.116	0.0368 %	0.0615	OK

ORGAN NAME  
 WHOLE BODY

GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 PRINTED: 02-FEB-89  
 PAGE: 36  
 STUDY NUMBER: 2GLP8605  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600759/PRETEST= 08600759 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 253.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.903	0.7522 %	1.0000	OK
07-JAN-87	29/5	LIVER	11.109	4.3909 %	5.8376	HIGH
07-JAN-87	29/5	KIDNEY	1.961	0.7751 %	1.0305	OK
07-JAN-87	29/5	HEART	0.957	0.3783 %	0.5029	OK
07-JAN-87	29/5	SPLEEN	0.586	0.2316 %	0.3079	OK
07-JAN-87	29/5	ADRENAL	0.092	0.0364 %	0.0483	HIGH
07-JAN-87	29/5	OVARIES	0.181	0.0715 %	0.0951	HIGH

ORGAN NAME  
 WHOLE BODY  
 GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY  
 -MINERALIZATION  
 NOT SPECIFIED(TRACE)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
 PRINTED: 02-FEB-89  
 PAGE: 37

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 ANIMAL NUMBER: 8600761/PRETEST= Q36D0761 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 345.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	2.046	0.5930 %	1.0000	OK
11-MAR-87	92/14	LIVER	11.493	3.3313 %	5.6173	OK
11-MAR-87	92/14	KIDNEY	1.986	0.5757 %	0.9707	LOW
11-MAR-87	92/14	HEART	1.089	0.3157 %	0.5323	OK
11-MAR-87	92/14	SPLEEN	0.565	0.1638 %	0.2761	LOW
11-MAR-87	92/14	ADRENAL	0.078	0.0226 %	0.0381	HIGH
11-MAR-87	92/14	OVARIES	0.182	0.0528 %	0.0890	OK

ORGAN NAME  
 WHOLE BODY  
 GROSS ORGAN OBSERVATIONS  
 KEYWORDS / PHRASES  
 SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 MICROCOPIC TISSUE OBSERVATIONS  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY  
 MINERALIZATION  
 NOT SPECIFIED (TRACE)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY  
STUDY START DATE: 10-DEC-86  
STUDY NUMBER: 2GLP8605  
STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
PRINTED: 02-FEB-89  
PAGE: 38

INDIVIDUAL ANIMAL DATA REPORT  
ANIMAL NUMBER: 8600771/PRETEST= Q8600771 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 2  
DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 267.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.935	0.7247 %	1.0000	OK
07-JAN-87	29/5	LIVER	10.245	3.8371 %	5.2946	OK
07-JAN-87	29/5	KIDNEY	1.851	0.6933 %	0.9566	OK
07-JAN-87	29/5	HEART	0.711	0.2663 %	0.3674	LOW
07-JAN-87	29/5	SPLEEN	0.607	0.2273 %	0.3137	OK
07-JAN-87	29/5	ADRENAL	0.071	0.0266 %	0.0367	HIGH
07-JAN-87	29/5	OVARIES	0.131	0.0491 %	0.0677	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS

WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY ..... NOT SPECIFIED(TRACE)  
-MINERALIZATION

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 2GLP8605

PRINTED: 02-FEB-89  
PAGE: 39

STUDY START DATE: 10-DEC-86

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600784/PRETEST# Q8600784 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: FINAL SACRIFICE  
DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 381.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	1.960	0.5144 %	1.0000	OK
11-MAR-87	92/14	LIVER	18.641	4.8927 %	9.5107	HIGH
11-MAR-87	92/14	KIDNEY	3.119	0.8186 %	1.5913	OK
11-MAR-87	92/14	HEART	1.597	0.4192 %	0.8148	OK
11-MAR-87	92/14	SPLEEN	3.697	0.9703 %	1.8862	HIGH
11-MAR-87	92/14	ADRENAL	0.135	0.0354 %	0.0689	HIGH
11-MAR-87	92/14	OVARIES	0.194	0.0509 %	0.0990	OK

ORGAN NAME	GROSS KEYWORDS / PHRASES	SEVERITY	ORGAN OBSERVATIONS	GROSS FREE-TEXT COMMENTS
SPLEEN	ENLARGED (SPLENOMEGALY)	MARKED	THE SPLEEN WAS ENLARGED BY A FACTOR OF FOUR.	
SPLEEN	FIBROUS ADHESION(S)	MODERATE	NUMEROUS OMENTAL ADHESIONS ARE WRAPPED AROUND THE SPLEEN AND EXTEND TO THE LEFT KIDNEY.	

TISSUE / HISTOPATHOLOGIC FINDINGS	MICROSCOPIC TISSUE	OBSERVATIONS	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
SPLEEN			
-NECROGRANULOMA			MULTI-FOCAL(MODERATE)
LIVER			
-INFLAMMATION,CHRONIC,MULTIFOAL			NOT SPECIFIED(TRACE)
KIDNEY			
-MINERALIZATION			NOT SPECIFIED(TRACE)
-INFLAMMATION,CHRONIC-ACTIVE,SEROSA			NOT SPECIFIED(MILD)

Pathology Annex D (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89  
 PAGE: 40  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 86D0789/PRETEST= Q86D0789 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 295.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.895	0.6424 %	1.0000	OK
07-JAN-87	29/5	LIVER	12.690	4.3017 %	6.6966	HIGH
07-JAN-87	29/5	KIDNEY	1.867	0.6329 %	0.9852	OK
07-JAN-87	29/5	HEART	1.037	0.3515 %	0.5472	OK
07-JAN-87	29/5	SPLEEN	0.738	0.2502 %	0.3894	OK
07-JAN-87	29/5	ADRENAL	0.060	0.0203 %	0.0317	HIGH
07-JAN-87	29/5	OVARIES	0.141	0.0478 %	0.0744	OK

<< GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY NUMBER: 2GLP6605  
 PRINTED: 02-FEB-89  
 PAGE: 41  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600802/PRETEST= Q8600802 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 359.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	1.773	0.4939 %	1.0000	OK
11-MAR-87	92/14	LIVER	12.716	3.5421 %	7.1720	OK
11-MAR-87	92/14	KIDNEY	2.289	0.6376 %	1.2910	OK
11-MAR-87	92/14	HEART	1.357	0.3780 %	0.7654	OK
11-MAR-87	92/14	SPLEEN	0.826	0.2301 %	0.4659	OK
11-MAR-87	92/14	ADRENAL	0.127	0.0354 %	0.0716	HIGH
11-MAR-87	92/14	OTHERIES	0.206	0.0574 %	0.1162	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY ..... NOT SPECIFIED(TRACE)  
 -MINERALIZATION  
 SOLEUS ..... NOT SPECIFIED(TRACE)  
 -INFLAMMATION, CHRONIC

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY NUMBER: 2GLP8605  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
 PRINTED: 02-FEB-89  
 PAGE: 42

ANIMAL NUMBER: 8600803/PRETEST= Q8600803 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 443.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN		2.152	0.4858 %	1.0000	OK
11-MAR-87	92/14	LIVER		15.748	3.5549 %	7.3178	OK
11-MAR-87	92/14	KIDNEY		2.591	0.5849 %	1.2040	LOW
11-MAR-87	92/14	HEART		1.385	0.3126 %	0.6436	OK
11-MAR-87	92/14	SPLEEN		0.611	0.1379 %	0.2839	LOW
11-MAR-87	92/14	ADRENAL		0.067	0.0151 %	0.0311	OK
11-MAR-87	92/14	OVARIES		0.149	0.0336 %	0.0692	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY ..... NOT SPECIFIED(TRACE)

DIAPHRAGM ..... NOT SPECIFIED(TRACE)

SOLEUS ..... NOT SPECIFIED(TRACE)



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY NUMBER: 26LP8605  
 PRINTED: 02-FEB-89  
 PAGE: 43  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 86D0805/PRETEST= Q86D0805 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 305.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	1.745	0.5721 %	1.0000	OK
11-MAR-87	92/14	LIVER	10.392	3.4072 %	5.9553	OK
11-MAR-87	92/14	KIDNEY	1.873	0.6141 %	1.0734	OK
11-MAR-87	92/14	HEART	1.105	0.3623 %	0.6332	OK
11-MAR-87	92/14	SPLEEN	0.462	0.1515 %	0.2648	LOW
11-MAR-87	92/14	ADRENAL	0.064	0.0210 %	0.0367	HIGH
11-MAR-87	92/14	OVARIES	0.123	0.0403 %	0.0705	OK

ORGAN NAME  
 WHOLE BODY  
 NO GROSS LESIONS RECOGNIZED.

GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES  
 SEVERITY GROSS FREE-TEXT COMMENTS  
 PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

PRINTED: 02-FEB-89  
 PAGE: 44

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605

STUDY START DATE: 10-DEC-86

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600826/PRETEST= Q86D0826 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 346.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	2.073	0.5991 %	1.0000	OK
11-MAR-87	92/14	LIVER	11.143	3.2205 %	5.3753	OK
11-MAR-87	92/14	KIDNEY	2.208	0.6382 %	1.0651	OK
11-MAR-87	92/14	HEART	1.281	0.3702 %	0.6179	OK
11-MAR-87	92/14	SPLEEN	0.431	0.1246 %	0.2079	LOW
11-MAR-87	92/14	ADRENAL	0.074	0.0214 %	0.0357	HIGH
11-MAR-87	92/14	OVARIES	0.118	0.0341 %	0.0569	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS

WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 26LP8605  
 STUDY START DATE: 10-DEC-86  
 PRINTED: 02-FEB-89  
 PAGE: 45  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 86D0827/PRETEST= Q86D0827 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 307.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	1.701	0.5541 %	1.0000	OK
11-MAR-87	92/14	LIVER	8.399	2.7358 %	4.9377	LOW
11-MAR-87	92/14	KIDNEY	2.256	0.7349 %	1.3263	OK
11-MAR-87	92/14	HEART	1.137	0.3704 %	0.6684	OK
11-MAR-87	92/14	SPLEEN	0.426	0.1388 %	0.2504	LOW
11-MAR-87	92/14	ADRENAL	0.103	0.0336 %	0.0606	HIGH
11-MAR-87	92/14	OVARIES	0.141	0.0459 %	0.0829	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY ..... NOT SPECIFIED (MILD)  
 -MINERALIZATION

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY NUMBER: 2GLP8605  
 PRINTED: 02-FEB-89  
 PAGE: 46

ANIMAL NUMBER: 86D0846/PRETEST= Q86D0846 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 287.00 (GMS)  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.717	0.5983 %	1.0000	OK
07-JAN-87	29/5	LIVER	12.220	4.2578 %	7.1171	HIGH
07-JAN-87	29/5	KIDNEY	2.117	0.7376 %	1.2330	OK
07-JAN-87	29/5	HEART	1.119	0.3899 %	0.6517	OK
07-JAN-87	29/5	SPLEEN	0.631	0.2199 %	0.3675	OK
07-JAN-87	29/5	ADRENAL	0.083	0.0289 %	0.0483	HIGH
07-JAN-87	29/5	OVARIES	0.209	0.0728 %	0.1217	HIGH

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

LUNGS  
 -INFLAMMATION, CHRONIC, PERIVASCULAR NOT SPECIFIED (TRACE)

KIDNEY  
 -INFLAMMATION, CHRONIC NOT SPECIFIED (TRACE)  
 -MINERALIZATION NOT SPECIFIED (TRACE)

SOLEUS  
 -INFLAMMATION, CHRONIC NOT SPECIFIED (TRACE)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89  
 PAGE: 47

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 86D0852/PRETEST= Q86D0852 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 251.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.872	0.7458 %	1.0000	OK
07-JAN-87	29/5	LIVER	9.747	3.8833 %	5.2067	OK
07-JAN-87	29/5	KIDNEY	1.895	0.7550 %	1.0123	OK
07-JAN-87	29/5	HEART	0.779	0.3104 %	0.4161	OK
07-JAN-87	29/5	SPLEEN	0.526	0.2096 %	0.2810	OK
07-JAN-87	29/5	ADRENAL	0.068	0.0271 %	0.0363	HIGH
07-JAN-87	29/5	OVARIES	0.124	0.0494 %	0.0662	OK

ORGAN NAME  
 WHOLE BODY

NO GROSS LESIONS RECOGNIZED.

NO GROSS OBSERVATIONS FOR THIS ANIMAL

TISSUE / HISTOPATHOLOGIC FINDINGS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

Pathology Annex D (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
 PRINTED: 02-FEB-89  
 PAGE: 48

## INDIVIDUAL ANIMAL DATA REPORT

STUDY NUMBER: 2GLP8605

STUDY START DATE: 10-DEC-86

SACRIFICE STATUS: FINAL SACRIFICE

TERMINAL BODY WEIGHT: 295.00 (GMS)

DOSE GROUP: 4

STUDY WEEK OF DEATH: 14

SEX: FEMALE

STUDY DAY OF DEATH: 93

ANIMAL NUMBER: 86D0766/PRETEST=

Q86D0766 SEX: FEMALE

DATE OF DEATH: 12-MAR-87

STUDY DAY OF DEATH: 93

## &lt;&lt; ORGAN WEIGHTS &gt;&gt;

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	1.835	0.6220 %	1.0000	OK
12-MAR-87	93/14	LIVER	12.531	4.2478 %	6.8289	HIGH
12-MAR-87	93/14	KIDNEY	2.305	0.7814 %	1.2561	OK
12-MAR-87	93/14	HEART	0.920	0.3119 %	0.5014	OK
12-MAR-87	93/14	SPLEEN	0.585	0.1983 %	0.3188	LOW
12-MAR-87	93/14	ADRENAL	0.082	0.0278 %	0.0447	HIGH
12-MAR-87	93/14	OVARIES	0.161	0.0546 %	0.0877	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS

WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
 PRINTED: 02-FEB-89  
 PAGE: 49

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605

ANIMAL NUMBER: 8600780/PRETEST= Q8600780 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 326.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHTS	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN		1.601	0.4911 %	1.0000	OK
12-MAR-87	93/14	LIVER		11.035	3.3850 %	6.8926	OK
12-MAR-87	93/14	KIDNEY		1.786	0.5479 %	1.1156	LOW
12-MAR-87	93/14	HEART		0.974	0.2988 %	0.6084	LOW
12-MAR-87	93/14	SPLEEN		0.487	0.1494 %	0.3042	LOW
12-MAR-87	93/14	ADRENAL		0.059	0.0181 %	0.0369	OK
12-MAR-87	93/14	OVARIES		0.117	0.0359 %	0.0731	OK

ORGAN NAME  
 WHOLE BODY

NO GROSS LESIONS RECOGNIZED.

NO GROSS LESIONS RECOGNIZED.

TISSUE / HISTOPATHOLOGIC FINDINGS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 2GLP8605  
STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89  
PAGE: 50  
STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 86D0785/PRETEST= 086D0785 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: INTERIM SACRIFICE 2  
DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 315.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHT (GMS) >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5		1.928	0.6121 %	1.0000	OK
07-JAN-87	29/5		11.154	3.5410 %	5.7853	OK
07-JAN-87	29/5		2.112	0.6705 %	1.0934	OK
07-JAN-87	29/5		1.071	0.3400 %	0.5555	OK
07-JAN-87	29/5		0.711	0.2257 %	0.3688	OK
07-JAN-87	29/5		0.070	0.0222 %	0.0363	HIGH
07-JAN-87	29/5		0.146	0.0463 %	0.0757	OK

<< GROSS ORGAN OBSERVATIONS >>  
KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

PRINTED: 02-FEB-89  
PAGE: 51

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 2GLP8605

STUDY START DATE: 10-DEC-86

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600787/PRETEST= Q8600787 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: FINAL SACRIFICE  
DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 315.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	1.699	0.5394 %	1.0000	OK
12-MAR-87	93/14	LIVER	10.457	3.3197 %	6.1548	OK
12-MAR-87	93/14	KIDNEY	1.980	0.6286 %	1.1654	OK
12-MAR-87	93/14	HEART	1.903	0.6041 %	1.1201	HIGH
12-MAR-87	93/14	SPLEEN	0.929	0.2949 %	0.5468	OK
12-MAR-87	93/14	ADRENAL	0.099	0.0314 %	0.0583	HIGH
12-MAR-87	93/14	OVARIES	0.112	0.0356 %	0.0659	OK

<< GROSS ORGAN OBSERVATIONS >>  
ORGAN NAME KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

Pathology Annex D (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
 PRINTED: 02-FEB-89  
 PAGE: 52

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605

ANIMAL NUMBER: 86D0790/PRETEST= Q86D0790 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 316.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.749	0.5535 %	1.0000	OK
07-JAN-87	29/5	LIVER	14.146	4.4766 %	8.0881	HIGH
07-JAN-87	29/5	KIDNEY	2.361	0.7472 %	1.3499	OK
07-JAN-87	29/5	HEART	1.089	0.3446 %	0.6226	OK
07-JAN-87	29/5	SPLEEN	0.580	0.1835 %	0.3316	LOW
07-JAN-87	29/5	ADRENAL	0.130	0.0411 %	0.0743	HIGH
07-JAN-87	29/5	OVARIES	0.184	0.0582 %	0.1052	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

SOLEUS ..... NOT SPECIFIED (TRACE)  
 INFLAMMATION, CHRONIC

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605

PRINTED: 02-FEB-89  
 PAGE: 53

STUDY START DATE: 10-DEC-86

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600793/PRETEST= Q8600793 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 347.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	2.125	0.6124 %	1.0000	OK
12-MAR-87	93/14	LIVER	12.695	3.6585 %	5.9741	OK
12-MAR-87	93/14	KIDNEY	2.315	0.6671 %	1.0894	OK
12-MAR-87	93/14	HEART	1.247	0.3594 %	0.5868	OK
12-MAR-87	93/14	SPLEEN	0.672	0.1937 %	0.3162	LOW
12-MAR-87	93/14	ADRENAL	0.060	0.0173 %	0.0282	OK
12-MAR-87	93/14	OVARIES	0.126	0.0363 %	0.0593	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

DIAPHRAGM ..... TISSUE IS MISSING

SOLEUS ..... NOT SPECIFIED(TRACE)  
 -INFLAMMATION,CHRONIC

Pathology Annex D (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAVLEY

PRINTED: 02-FEB-89  
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INDIVIDUAL ANIMAL DATA REPORT

STUDY NUMBER: 2GLP8605

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

STUDY START DATE: 10-DEC-86

ANIMAL NUMBER: 8600794/PRETEST= 08600794 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 276.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.827	0.6620 %	1.0000	OK
07-JAN-87	29/5	LIVER	9.067	3.2851 %	4.9628	OK
07-JAN-87	29/5	KIDNEY	1.854	0.6717 %	1.0148	OK
07-JAN-87	29/5	HEART	0.860	0.3188 %	0.4817	OK
07-JAN-87	29/5	SPLEEN	0.487	0.1764 %	0.2666	LOW
07-JAN-87	29/5	ADRENAL	0.058	0.0210 %	0.0317	HIGH
07-JAN-87	29/5	OVARIES	0.151	0.0547 %	0.0826	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS

WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

LIVER ..... NOT SPECIFIED (TRACE)  
 -INFLAMMATION, CHRONIC, MULTIFOCAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY NUMBER: 2GLP8605  
 PRINTED: 02-FEB-89  
 PAGE: 55  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600811/PRETEST= Q8600811 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 302.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	1.773	0.5871 %	1.0000	OK
12-MAR-87	93/14	LIVER	12.316	4.0781 %	6.9464	HIGH
12-MAR-87	93/14	KIDNEY	2.058	0.6815 %	1.1607	OK
12-MAR-87	93/14	HEART	1.010	0.3344 %	0.5697	OK
12-MAR-87	93/14	SPLEEN	0.566	0.1874 %	0.3192	LOW
12-MAR-87	93/14	ADRENAL	0.116	0.0384 %	0.0654	HIGH
12-MAR-87	93/14	OVARIES	0.145	0.0480 %	0.0818	OK

ORGAN NAME  
 WHOLE BODY  
 GROSS ORGAN OBSERVATIONS  
 KEYWORDS / PHRASES  
 NO GROSS LESIONS RECOGNIZED.  
 SEVERITY GROSS FREE-TEXT COMMENTS  
 PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 MICROSCOPIC TISSUE OBSERVATIONS  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

Pathology Annex D (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 10-DEC-86  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
 PRINTED: 02-FEB-89  
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ANIMAL NUMBER: 8600812/PRETEST= Q8600812 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 351.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	1.870	0.5328 %	1.0000	OK
12-MAR-87	93/14	LIVER	11.768	3.3527 %	6.2930	OK
12-MAR-87	93/14	KIDNEY	2.520	0.7179 %	1.3476	OK
12-MAR-87	93/14	HEART	1.135	0.3234 %	0.6070	OK
12-MAR-87	93/14	SPLEEN	0.852	0.2427 %	0.4556	OK
12-MAR-87	93/14	ADRENAL	0.095	0.0271 %	0.0508	HIGH
12-MAR-87	93/14	OVARIES	0.163	0.0464 %	0.0872	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

LIVER - VACUOLIZATION, FOCAL NOT SPECIFIED (TRACE)

KIDNEY - MINERALIZATION NOT SPECIFIED (TRACE)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 1J-DEC-86

PRINTED: 02-FEB-89  
 PAGE: 57  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600821/PRETEST= Q8600821 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 257.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.715	0.6673 %	1.0000	OK
07-JAN-87	29/5	LIVER	9.399	3.6572 %	5.4805	OK
07-JAN-87	29/5	KIDNEY	1.821	0.7086 %	1.0618	OK
07-JAN-87	29/5	HEART	0.939	0.3654 %	0.5475	OK
07-JAN-87	29/5	SPLEEN	0.502	0.1953 %	0.2927	LOW
07-JAN-87	29/5	ADRENAL	0.064	0.0249 %	0.0373	HIGH
07-JAN-87	29/5	OVARIES	0.150	0.0584 %	0.0875	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

LIVER ..... NOT SPECIFIED (TRACE)  
 - INFLAMMATION, CHRONIC, MULTIFOCAL

KIDNEY ..... NOT SPECIFIED (TRACE)  
 - MINERALIZATION

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 2GLP8605  
STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89  
PAGE: 58  
STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600842/PRETEST= Q8600842 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: INTERIM SACRIFICE 2  
DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 260.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.735	0.6673 %	1.0000	OK
07-JAN-87	29/5	LIVER	9.240	3.5538 %	5.3256	OK
07-JAN-87	29/5	KIDNEY	1.730	0.6654 %	0.9971	OK
07-JAN-87	29/5	HEART	0.940	0.3615 %	0.5418	OK
07-JAN-87	29/5	SPLEEN	0.559	0.2150 %	0.3222	OK
07-JAN-87	29/5	ADRENAL	0.100	0.0385 %	0.0576	HIGH
07-JAN-87	29/5	OVARIES	0.197	0.0758 %	0.1135	HIGH

ORGAN NAME  
WHOLE BODY

GROSS ORGAN OBSERVATIONS >>  
KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
MICROSCOPIC TISSUE OBSERVATIONS >>  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY  
-MINERALIZATION

NOT SPECIFIED(TRACE)



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89  
 PAGE: 59  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 86D0844/PRETEST= Q86D0844 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 310.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	1.894	0.6110 %	1.0000	OK
12-MAR-87	93/14	LIVER	11.376	3.6697 %	6.0063	OK
12-MAR-87	93/14	KIDNEY	2.285	0.7371 %	1.2064	OK
12-MAR-87	93/14	HEART	1.206	0.3890 %	0.6367	OK
12-MAR-87	93/14	SPLEEN	0.560	0.1806 %	0.2957	LOW
12-MAR-87	93/14	ADRENAL	0.068	0.0219 %	0.0359	HIGH
12-MAR-87	93/14	OVARIES	0.113	0.0365 %	0.0597	OK

ORGAN NAME  
 WHOLE BODY

GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 10-DEC-86  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
 PRINTED: 02-FEB-89  
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ANIMAL NUMBER: 8600848/PRETEST= Q8600848 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 320.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	1.788	0.5588 %	1.0000	OK
12-MAR-87	93/14	LIVER	9.499	2.9684 %	5.3126	LOW
12-MAR-87	93/14	KIDNEY	2.043	0.6384 %	1.1426	OK
12-MAR-87	93/14	HEART	0.876	0.2738 %	0.4899	LOW
12-MAR-87	93/14	SPLEEN	0.587	0.1834 %	0.3283	LOW
12-MAR-87	93/14	ADRENAL	0.123	0.0384 %	0.0688	HIGH
12-MAR-87	93/14	OVARIES	0.182	0.0569 %	0.1018	OK

ORGAN NAME  
 WHOLE BODY  
 GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

LUNGS  
 AGGREGATIONS OF ALVEOLAR MACROPHAGES (HISTIOCYTOSIS)  
 NOT SPECIFIED (TRACE)  
 KIDNEY  
 MINERALIZATION  
 NOT SPECIFIED (TRACE)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY NUMBER: 26LP8605  
 PRINTED: 02-FEB-89  
 PAGE: 61  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600851/PRETEST= Q8600851 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 293.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	1.824	0.6225 %	1.0000	OK
12-MAR-87	93/14	LIVER	10.507	3.5860 %	5.7604	OK
12-MAR-87	93/14	KIDNEY	1.846	0.6300 %	1.0121	OK
12-MAR-87	93/14	HEART	0.855	0.2918 %	0.4688	LOW
12-MAR-87	93/14	SPLEEN	0.413	0.1410 %	0.2264	LOW
12-MAR-87	93/14	ADRENAL	0.082	0.0280 %	0.0450	HIGH
12-MAR-87	93/14	OVARIES	0.148	0.0505 %	0.0811	OK

ORGAN NAME  
 WHOLE BODY  
 NO GROSS LESIONS RECOGNIZED.  
 PRESENT  
 GROSS ORGAN OBSERVATIONS  
 KEYWORDS / PHRASES  
 SEVERITY GROSS FREE-TEXT COMMENTS

TISSUE / HISTOPATHOLOGIC FINDINGS  
 MICROSCOPIC TISSUE OBSERVATIONS  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605

PRINTED: 02-FEB-89  
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STUDY START DATE: 10-DEC-86

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 86D0854/PRETEST= Q86D0854 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 295.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	1.858	0.6298 %	1.0000	OK
12-MAR-87	93/14	LIVER	12.029	4.0776 %	6.4742	HIGH
12-MAR-87	93/14	KIDNEY	2.266	0.7681 %	1.2196	OK
12-MAR-87	93/14	HEART	0.966	0.3275 %	0.5199	OK
12-MAR-87	93/14	SPLEEN	0.552	0.1871 %	0.2971	LOW
12-MAR-87	93/14	ADRENAL	0.071	0.0241 %	0.0382	HIGH
12-MAR-87	93/14	OVARIES	0.138	0.0468 %	0.0743	OK

<< GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89  
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STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600760/PRETEST= Q8600760 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 303.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	2.005	0.6617 %	1.0000	OK
12-MAR-87	93/14	LIVER	10.494	3.4634 %	5.2339	OK
12-MAR-87	93/14	KIDNEY	2.060	0.6799 %	1.0274	OK
12-MAR-87	93/14	HEART	1.091	0.3601 %	0.5441	OK
12-MAR-87	93/14	SPLEEN	0.608	0.2007 %	0.3032	OK
12-MAR-87	93/14	ADRENAL	0.080	0.0264 %	0.0399	HIGH
12-MAR-87	93/14	OVARIES	0.099	0.0327 %	0.0494	LOW

ORGAN NAME  
 WHOLE BODY

NO GROSS LESIONS RECOGNIZED.

GROSS ORGAN OBSERVATIONS  
 SEVERITY GROSS FREE-TEXT COMMENTS

TISSUE / HISTOPATHOLOGIC FINDINGS

MICROSCOPIC TISSUE OBSERVATIONS  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY  
 -MINERALIZATION

NOT SPECIFIED(MILD)

SOLEUS  
 -INFLAMMATION, CHRONIC

NOT SPECIFIED(MILD)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY NUMBER: 2GLP8605  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
 PRINTED: 02-FEB-89  
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ANIMAL NUMBER: 8600762/PRETEST= Q86D0762 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 307.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	1.646	0.5362 %	1.0000	OK
12-MAR-87	93/14	LIVER	11.498	3.7453 %	6.9854	OK
12-MAR-87	93/14	KIDNEY	1.984	0.6463 %	1.2053	OK
12-MAR-87	93/14	HEART	1.067	0.3476 %	0.6482	OK
12-MAR-87	93/14	SPLEEN	0.506	0.1648 %	0.3074	LOW
12-MAR-87	93/14	ADRENAL	0.059	0.0192 %	0.0358	OK
12-MAR-87	93/14	OVARIES	0.113	0.0368 %	0.0697	OK

ORGAN NAME  
 WHOLE BODY  
 NO GROSS LESIONS RECOGNIZED.

TISSUE / HISTOPATHOLOGIC FINDINGS  
 NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY NUMBER: 2GLP8605  
 PRINTED: 02-FEB-89  
 PAGE: 65

ANIMAL NUMBER: 8600769/PRETEST= Q8600769 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 339.00 (GMS)  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	1.690	0.4985 %	1.0000	OK
12-MAR-87	93/14	LIVER	12.406	3.6596 %	7.3408	OK
12-MAR-87	93/14	KIDNEY	2.215	0.6534 %	1.3107	OK
12-MAR-87	93/14	HEART	1.074	0.3168 %	0.6355	OK
12-MAR-87	93/14	SPLEEN	0.594	0.1752 %	0.3515	LOW
12-MAR-87	93/14	ADRENAL	0.091	0.0268 %	0.0538	HIGH
12-MAR-87	93/14	OVARIES	0.162	0.0478 %	0.0959	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

LUNGS  
 -AGGREGATIONS OF ALVEOLAR MACROPHAGES (HISTIOCYTOSIS) NOT SPECIFIED(TRACE)  
 KIDNEY  
 -INFLAMMATION, CHRONIC NOT SPECIFIED(TRACE)  
 SOLEUS  
 -INFLAMMATION, CHRONIC NOT SPECIFIED(TRACE)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY NUMBER: 2GLP8605  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
 PRINTED: 02-FEB-89  
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ANIMAL NUMBER: 8600770/PRETEST= 08600770 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 359.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	2.057	0.5730 %	1.0000	OK
12-MAR-87	93/14	LIVER	14.325	3.9903 %	6.9640	OK
12-MAR-87	93/14	KIDNEY	2.251	0.6270 %	1.0943	OK
12-MAR-87	93/14	HEART	1.175	0.3273 %	0.5712	OK
12-MAR-87	93/14	SPLEEN	0.808	0.2251 %	0.3928	OK
12-MAR-87	93/14	ADRENAL	0.115	0.0320 %	0.0559	HIGH
12-MAR-87	93/14	OVARIES	0.130	0.0362 %	0.0632	OK

ORGAN NAME  
 WHOLE BODY  
 GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

LIVER  
 -INFLAMMATION, CHRONIC, MULTIFOCAL NOT SPECIFIED (TRACE)

KIDNEY  
 -NEPHROPATHY NOT SPECIFIED (TRACE)



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP., PATH SERV GP  
 SPECIES: RAT/S. RAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY NUMBER: 2GLP8605  
 PRINTED: 02-FEB-89  
 PAGE: 67  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600775/PRETEST= Q8600775 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 271.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.880	0.6937 %	1.0000	OK
07-JAN-87	29/5	LIVER	9.872	3.6428 %	5.2511	OK
07-JAN-87	29/5	KIDNEY	1.935	0.7140 %	1.0293	OK
07-JAN-87	29/5	HEART	0.864	0.3188 %	0.4596	OK
07-JAN-87	29/5	SPLEEN	0.693	0.2557 %	0.3686	OK
07-JAN-87	29/5	ADRENAL	0.067	0.0247 %	0.0356	HIGH
07-JAN-87	29/5	OVARIES	0.164	0.0605 %	0.0872	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

LIVER ..... NOT SPECIFIED(TRACE)  
 -INFLAMMATION, CHRONIC, MULTIFOCAL  
 KIDNEY ..... NOT SPECIFIED(TRACE)  
 -MINERALIZATION

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 10-DEC-81  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
 PRINTED: 02-FEB-89  
 PAGE: 68

ANIMAL NUMBER: 8600782/PRETEST= Q8600782 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 287.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.906	0.6641 %	1.0000	OK
07-JAN-87	29/5	LIVER	10.520	3.6655 %	5.5194	OK
07-JAN-87	29/5	KIDNEY	1.878	0.6544 %	0.9853	OK
07-JAN-87	29/5	HEART	1.036	0.3610 %	0.5435	OK
07-JAN-87	29/5	SPLEEN	0.667	0.2324 %	0.3499	OK
07-JAN-87	29/5	ADRENAL	0.064	0.0223 %	0.0336	HIGH
07-JAN-87	29/5	OVARIES	0.127	0.0443 %	0.0666	OK

ORGAN NAME  
 WHOLE BODY  
 GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

SOLEUS  
 -DEGENERATION, FOCAL  
 -INFLAMMATION, SUBACUTE  
 NOT SPECIFIED (TRACE)  
 NOT SPECIFIED (TRACE)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 PRINTED: 02-FEB-89  
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STUDY START DATE: 10-DEC-86  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600797/PRETEST= 08600797 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 321.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< OR G A N	W E I G H T S >>	ABSOLUTE ORG A N WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.744	0.5433 %	1.0000	OK	
07-JAN-87	29/5	LIVER	11.953	3.7237 %	6.8538	OK	
07-JAN-87	29/5	KIDNEY	2.060	0.6417 %	1.1812	OK	
07-JAN-87	29/5	HEART	1.178	0.3670 %	0.6755	OK	
07-JAN-87	29/5	SPLEEN	0.578	0.1801 %	0.3314	LOW	
07-JAN-87	29/5	ADRENAL	0.110	0.0343 %	0.0631	HIGH	
07-JAN-87	29/5	OVARIES	0.153	0.0477 %	0.0877	OK	

ORGAN NAME << G R O S S O R G A N O B S E R V A T I O N S >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << M I C R O S C O P I C T I S S U E O B S E R V A T I O N S >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY ..... NOT SPECIFIED(TRACE)  
 -MINERALIZATION

Pathology Annex D (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 26LP8605  
 STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89  
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ANIMAL NUMBER: 860819/PRETEST= 086D0819 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 353.00 (GMS)

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	1.875	0.5312 %	1.0000	OK
12-MAR-87	93/14	LIVER	13.273	3.7601 %	7.0789	OK
12-MAR-87	93/14	KIDNEY	2.523	0.7147 %	1.3456	OK
12-MAR-87	93/14	HEART	1.149	0.3255 %	0.6128	OK
12-MAR-87	93/14	SPLEEN	0.718	0.2034 %	0.3829	OK
12-MAR-87	93/14	ADRENAL	0.091	0.0258 %	0.0485	HIGH
12-MAR-87	93/14	OVARIES	0.164	0.0465 %	0.0875	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS

WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY ..... TISSUE IS MISSING

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

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INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 26LP8605

STUDY START DATE: 10-DEC-86 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 86D0820/PRETEST= Q86D0820 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 301.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	1.824	0.6060 %	1.0000	OK
12-MAR-87	93/14	LIVER	10.182	3.3827 %	5.5822	OK
12-MAR-87	93/14	KIDNEY	1.971	0.6548 %	1.0806	OK
12-MAR-87	93/14	HEART	0.995	0.3306 %	0.5455	OK
12-MAR-87	93/14	SPLEEN	0.421	0.1399 %	0.2308	LOW
12-MAR-87	93/14	ADRENAL	0.075	0.0249 %	0.0411	HIGH
12-MAR-87	93/14	OVARIES	0.133	0.0442 %	0.0729	OK

ORGAN NAME  
 WHOLE BODY

<< GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

Pathology Annex D (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 10-DEC-86

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 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600831/PRETEST= Q8600831 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 315.00 (GMS)

## &lt;&lt; ORGAN WEIGHTS &gt;&gt;

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	1.905	0.6048 %	1.0000	OK
12-MAR-87	93/14	LIVER	10.121	3.2130 %	5.3129	OK
12-MAR-87	93/14	KIDNEY	1.878	0.5962 %	0.9858	LOW
12-MAR-87	93/14	HEART	1.007	0.3197 %	0.5286	OK
12-MAR-87	93/14	SPLEEN	0.621	0.1971 %	0.3260	LOW
12-MAR-87	93/14	ADRENAL	0.081	0.0257 %	0.0425	HIGH
12-MAR-87	93/14	OVARIES	0.170	0.0540 %	0.0892	OK

## &lt;&lt; GROSS ORGAN OBSERVATIONS &gt;&gt;

ORGAN NAME	GROSS KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
WHOLE BODY	NO GROSS LESIONS RECOGNIZED.	PRESENT	

## &lt;&lt; MICROSCOPIC TISSUE OBSERVATIONS &gt;&gt;

TISSUE / HISTOPATHOLOGIC FINDINGS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 2GLP8605

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STUDY START DATE: 10-DEC-86

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 86D0835/PRETEST= Q86D0835 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: INTERIM SACRIFICE 2  
DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 258.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.853	0.7182 %	1.0000	OK
07-JAN-87	29/5	LIVER	8.377	3.2469 %	4.5208	OK
07-JAN-87	29/5	KIDNEY	1.776	0.6884 %	0.9584	OK
07-JAN-87	29/5	HEART	1.142	0.4426 %	0.6163	OK
07-JAN-87	29/5	SPLEEN	0.440	0.1705 %	0.2375	LOW
07-JAN-87	29/5	ADRENAL	0.073	0.0283 %	0.0394	HIGH
07-JAN-87	29/5	OVARIES	0.143	0.0554 %	0.0772	OK

ORGAN NAME  
WHOLE BODY

<< GROSS ORGAN OBSERVATIONS >>  
KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY  
INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 2GLP8605  
STUDY START DATE: 10-DEC-86  
STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
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ANIMAL NUMBER: 8600841/PRETEST= Q8600841 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: INTERIM SACRIFICE 2  
DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 239.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN	WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.699	0.7109 %	1.0000	OK
07-JAN-87	29/5	LIVER	8.480	3.5481 %	4.9912	OK
07-JAN-87	29/5	KIDNEY	1.576	0.6594 %	0.9276	OK
07-JAN-87	29/5	HEART	0.837	0.3502 %	0.4926	OK
07-JAN-87	29/5	SPLEEN	0.432	0.1808 %	0.2543	LOW
07-JAN-87	29/5	ADRENAL	0.082	0.0343 %	0.0483	HIGH
07-JAN-87	29/5	OVARIES	0.130	0.0544 %	0.0765	OK

ORGAN NAME  
KEYWORDS / PHRASES  
NO GROSS LESIONS RECOGNIZED.  
PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
MICROSCOPIC TISSUE OBSERVATIONS  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

LIVER  
-INFLAMMATION, CHRONIC, MULTIFOCAL  
NOT SPECIFIED (TRACE)



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY NUMBER: 2GLP8605  
 PRINTED: 02-FEB-89  
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 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600845/PRETEST= Q8600845 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 360.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	1.721	0.4781 %	1.0000	LOW
12-MAR-87	93/14	LIVER	12.965	3.6014 %	7.5334	OK
12-MAR-87	93/14	KIDNEY	2.351	0.6531 %	1.3661	OK
12-MAR-87	93/14	HEART	1.091	0.3031 %	0.6339	OK
12-MAR-87	93/14	SPLEEN	0.596	0.1656 %	0.3463	LOW
12-MAR-87	93/14	ADRENAL	0.139	0.0386 %	0.0808	HIGH
12-MAR-87	93/14	OVARIES	0.198	0.0550 %	0.1150	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY .....  
 -B-ADENOMA ..... (PRESENT)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

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## INDIVIDUAL ANIMAL DATA REPORT

STUDY NUMBER: 26LP8605  
 STUDY START DATE: 10-DEC-86  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600847/PRETEST= 08600847 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 359.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	2.120	0.5905 %	1.0000	OK
12-MAR-87	93/14	LIVER	11.949	3.3284 %	5.6363	OK
12-MAR-87	93/14	KIDNEY	2.131	0.5936 %	1.0052	LOW
12-MAR-87	93/14	HEART	1.140	0.3175 %	0.5377	OK
12-MAR-87	93/14	SPLEEN	0.569	0.1585 %	0.2684	LOW
12-MAR-87	93/14	ADRENAL	0.064	0.0178 %	0.0302	OK
12-MAR-87	93/14	OVARIES	0.102	0.0284 %	0.0481	LOW

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS

WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605

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STUDY START DATE: 10-DEC-86 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600856/PRETEST= Q8600856 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 12-MAR-87 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 295.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
12-MAR-87	93/14	BRAIN	1.839	0.6234 %	1.0000	OK
12-MAR-87	93/14	LIVER	8.978	3.0434 %	4.8820	OK
12-MAR-87	93/14	KIDNEY	1.860	0.6305 %	1.0114	OK
12-MAR-87	93/14	HEART	1.090	0.3695 %	0.5927	OK
12-MAR-87	93/14	SPLEEN	0.466	0.1580 %	0.2534	LOW
12-MAR-87	93/14	ADRENAL	0.069	0.0234 %	0.0375	HIGH
12-MAR-87	93/14	OVARIES	0.162	0.0549 %	0.0881	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

NO MICROSCOPIC OBSERVATIONS FOR THIS ANIMAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 26LP8605  
STUDY START DATE: 10-DEC-86

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STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600750/PRETEST= Q8600750 SEX: FEMALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE  
DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 345.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	1.935	0.5609 %	1.0000	OK
11-MAR-87	92/14	LIVER	10.944	3.1722 %	5.6558	OK
11-MAR-87	92/14	KIDNEY	2.183	0.6328 %	1.1282	OK
11-MAR-87	92/14	HEART	1.105	0.3203 %	0.5711	OK
11-MAR-87	92/14	SPLEEN	0.498	0.1443 %	0.2574	LOW
11-MAR-87	92/14	ADRENAL	0.098	0.0284 %	0.0506	HIGH
11-MAR-87	92/14	OVARIES	0.155	0.0449 %	0.0801	OK

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
WHOLE BODY	NO GROSS LESIONS RECOGNIZED.	PRESENT	

TISSUE / HISTOPATHOLOGIC FINDINGS	MICROSCOPIC TISSUE	OBSERVATIONS >> DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
THYROID GLANDS - CYST - INFLAMMATION, CHRONIC		NOT SPECIFIED(MILD) NOT SPECIFIED(TRACE)
HARDERIAN GLAND - INFLAMMATION, CHRONIC		NOT SPECIFIED(TRACE)
THYMUS - HEMORRHAGE, MULTIFOCAL		NOT SPECIFIED(TRACE)
LIVER - INFLAMMATION, CHRONIC, MULTIFOCAL		NOT SPECIFIED(TRACE)

# Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 2GLP8605  
STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89  
PAGE: 79

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600750/PRETEST= Q8600750 SEX: FEMALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE  
DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 345.00 (GMS)

TISSUE / HISTOPATHOLOGIC FINDINGS  
MICROSCOPIC TISSUE OBSERVATIONS  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

PITUITARY GLAND ..... TISSUE IS MISSING

Pathology Annex D (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY NUMBER: 2GLP8605  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
 PRINTED: 02-FEB-89  
 PAGE: 80

ANIMAL NUMBER: 8600754/PRETEST= Q8600754 SEX: FEMALE DOSE GROUP: 6 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 263.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.816	0.6905 %	1.0000	OK
07-JAN-87	29/5	LIVER	9.327	3.5449 %	5.1338	OK
07-JAN-87	29/5	KIDNEY	1.67	0.6354 %	0.9202	OK
07-JAN-87	29/5	HEART	0.860	0.3270 %	0.4736	OK
07-JAN-87	29/5	SPLEEN	0.702	0.2669 %	0.3866	OK
07-JAN-87	29/5	ADRENAL	0.063	0.0240 %	0.0347	HIGH
07-JAN-87	29/5	OVARIES	0.126	0.0479 %	0.0694	OK

<< GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

THYROID GLANDS ..... NOT SPECIFIED(TRACE)  
 -CYST

EXORBITAL LACRIM ..... TISSUE IS MISSING

KIDNEY ..... NOT SPECIFIED(TRACE)  
 -MINERALIZATION

SUBMANDIBULAR LN ..... MISCELLANEOUS TISSUE  
 -HYPERPLASIA, LYMPHOID NOT SPECIFIED(TRACE)

Pathology Annex D (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY  
STUDY START DATE: 10-DEC-86  
STUDY NUMBER: 2GLP8605  
PRINTED: 02-FEB-89  
PAGE: 81

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600757/PRETEST= Q8600757 SEX: FEMALE DOSE GROUP: 6 SACRIFICE STATUS: INTERIM SACRIFICE 2  
DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 261.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.867	0.7153 %	1.0000	OK
07-JAN-87	29/5	LIVER	9.457	3.6234 %	5.0653	OK
07-JAN-87	29/5	KIDNEY	2.016	0.7724 %	1.0798	OK
07-JAN-87	29/5	HEART	0.937	0.3590 %	0.5019	OK
07-JAN-87	29/5	SPLEEN	0.777	0.2977 %	0.4162	OK
07-JAN-87	29/5	ADRENAL	0.077	0.0295 %	0.0412	HIGH
07-JAN-87	29/5	OVARIES	0.163	0.0625 %	0.0873	OK

ORGAN NAME  
WHOLE BODY  
GROSS ORGAN OBSERVATIONS  
KEYWORDS / PHRASES  
SEVERITY GROSS FREE-TEXT COMMENTS  
NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
MICROSCOPIC TISSUE OBSERVATIONS  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY  
-MINERALIZATION  
-NEPHROPATHY  
NOT SPECIFIED(TRACE)  
NOT SPECIFIED(TRACE)

UTERUS  
-DILATATION OF THE UTERINE LUMEN (HYDROMETRA)  
NOT SPECIFIED(TRACE)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

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STUDY NUMBER: 2GLP8605

STUDY START DATE: 10-DEC-86

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600773/PRETEST= Q8600773 SEX: FEMALE DOSE GROUP: 6 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 278.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.951	0.7018 %	1.0000	OK
07-JAN-87	29/5	LIVER	9.279	3.3378 %	4.7560	OK
07-JAN-87	29/5	KIDNEY	2.006	0.7216 %	1.0282	OK
07-JAN-87	29/5	HEART	0.968	0.3482 %	0.4962	OK
07-JAN-87	29/5	SPLEEN	0.632	0.2273 %	0.3239	OK
07-JAN-87	29/5	ADRENAL	0.080	0.0288 %	0.0410	HIGH
07-JAN-87	29/5	OVARIES	0.191	0.0687 %	0.0979	HIGH

<< GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

THYROID GLANDS ..... NOT SPECIFIED (TRACE)  
 -CYST

LUNGS ..... NOT SPECIFIED (TRACE)  
 -INFLAMMATION, CHRONIC, FOCAL

LIVER ..... NOT SPECIFIED (TRACE)  
 -INFLAMMATION, CHRONIC, MULTIFOCAL

PANCREAS ..... NOT SPECIFIED (TRACE)  
 -ACINAR (EXOCRINE) ATROPHY  
 -CHRONIC INFLAMMATION



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 PRINTED: 02-FEB-89  
 PAGE: 83  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
 ANIMAL NUMBER: 8600773/PRETEST# Q8600773 SEX: FEMALE DOSE GROUP: 6 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 276.00 (GMS)  
 TISSUE / HISTOPATHOLOGIC FINDINGS  
 << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS  
 EYES & OPTIC N. .... OPTIC NERVES ONLY ARE MISSING ON A AND B ONLY.  
 SOLEUS ..... NOT SPECIFIED(MILD)  
 - INFLAMMATION, ACUTE

Pathology Annex D (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 2GLP8605  
STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89  
PAGE: 84  
STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600779/PRETEST= 08600779 SEX: FEMALE DOSE GROUP: 6 SACRIFICE STATUS: INTERIM SACRIFICE 2  
DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 289.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.712	0.5924 %	1.0000	OK
07-JAN-87	29/5	LIVER	10.487	3.6287 %	6.1256	OK
07-JAN-87	29/5	KIDNEY	2.009	0.6952 %	1.1735	OK
07-JAN-87	29/5	HEART	1.254	0.4339 %	0.7325	OK
07-JAN-87	29/5	SPLEEN	0.781	0.2702 %	0.4562	OK
07-JAN-87	29/5	ADRENAL	0.079	0.0273 %	0.0461	HIGH
07-JAN-87	29/5	OVARIES	0.175	0.0606 %	0.1022	OK

ORGAN NAME	KEYWORDS / PHRASES	SEVERITY	GROSS FREE-TEXT COMMENTS
SKIN	ALOPECIA	MILD	PARTIAL, RIGHT SHOULDER.

TISSUE / HISTOPATHOLOGIC FINDINGS	TISSUE	DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS
LIVER		NOT SPECIFIED (TRACE)
KIDNEY		NOT SPECIFIED (TRACE)
PANCREAS		NOT SPECIFIED (MILD)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
DIV OF RES SUPP, PATH SERV GP  
SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
STUDY NUMBER: 2GLP8605  
STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89  
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ANIMAL NUMBER: 8600783/PRETEST= Q8600783 SEX: FEMALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE  
DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 357.00 (GMS)

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	1.990	0.5574 %	1.0000	OK
11-MAR-87	92/14	LIVER	14.557	4.0776 %	7.3151	HIGH
11-MAR-87	92/14	KIDNEY	2.533	0.7095 %	1.2729	OK
11-MAR-87	92/14	HEART	1.263	0.3538 %	0.6347	OK
11-MAR-87	92/14	SPLEEN	0.723	0.2025 %	0.3633	OK
11-MAR-87	92/14	ADRENAL	0.108	0.0303 %	0.0543	HIGH
11-MAR-87	92/14	OVARIES	0.072	0.0202 %	0.0362	LOW

ORGAN NAME  
KEYWORDS / PHRASES  
WHOLE BODY

<< GROSS ORGAN OBSERVATIONS >>  
SEVERITY GROSS FREE-TEXT COMMENTS  
NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
MICROSCOPIC TISSUE OBSERVATIONS >>  
DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

KIDNEY  
MINERALIZATION  
EYES & OPTIC N.

NOT SPECIFIED(TRACE)  
OPTIC NERVE ONLY IS MISSING ON BOTH 19A AND B.

Pathology Annex D (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY NUMBER: 2GLP8605  
 PRINTED: 02-FEB-89  
 PAGE: 86  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 8600792/PRETEST= Q8600792 SEX: FEMALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 276.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	1.710	0.6196 %	1.0000	OK
11-MAR-87	92/14	LIVER	9.347	3.3866 %	5.4661	OK
11-MAR-87	92/14	KIDNEY	1.694	0.6138 %	0.9906	OK
11-MAR-87	92/14	HEART	0.945	0.3424 %	0.5526	OK
11-MAR-87	92/14	SPLEEN	0.475	0.1721 %	0.2778	LOW
11-MAR-87	92/14	ADRENAL	0.087	0.0315 %	0.0509	HIGH
11-MAR-87	92/14	OVARIES	0.124	0.0449 %	0.0725	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

MESENTERIC LYM N ..... TISSUE IS MISSING  
 LIVER ..... NOT SPECIFIED(TRACE)  
 -INFLAMMATION,CHRONIC,MULTIFOCA  
 KIDNEY ..... NOT SPECIFIED(TRACE)  
 -MINERALIZATION  
 ADRENAL ..... NOT SPECIFIED(TRACE)  
 -ACCESSORY ADRENAL

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY NUMBER: 2GLP8605  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
 PRINTED: 02-FEB-89  
 PAGE: 87

ANIMAL NUMBER: 8600798/PRETEST= Q8600798 SEX: FEMALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 338.00 (GMS)

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	2.187	0.6470 %	1.0000	OK
11-MAR-87	92/14	LIVER	12.101	3.5802 %	5.5332	OK
11-MAR-87	92/14	KIDNEY	2.752	0.8142 %	1.2583	OK
11-MAR-87	92/14	HEART	1.251	0.3701 %	0.5720	OK
11-MAR-87	92/14	SPLEEN	0.651	0.1926 %	0.2977	LOW
11-MAR-87	92/14	ADRENAL	0.137	0.0405 %	0.0626	HIGH
11-MAR-87	92/14	OVARIES	0.215	0.0636 %	0.0983	OK

<< GROSS ORGAN OBSERVATIONS >>  
 SEVERITY GROSS FREE-TEXT COMMENTS  
 MODERATE RT FOREARM 1X3CM WITH SCABS. LT FOREARM 1X2CM NO SCAB.  
 ALOPECIA

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

HARDERIAN GLAND ..... NOT SPECIFIED(TRACE)  
 -INFLAMMATION, CHRONIC  
 EXORBITAL LACRIM ..... TISSUE IS MISSING  
 MESENTERIC LYM N ..... TISSUE IS MISSING  
 LIVER ..... NOT SPECIFIED(TRACE)  
 -INFLAMMATION, CHRONIC, MULTIFOCAL  
 URINARY BLADDER ..... TISSUE IS MISSING

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY NUMBER: 2GLP8605  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
 PRINTED: 02-FEB-89  
 PAGE: 88  
 ANIMAL NUMBER: 8600798/PRETEST= 08600798 SEX: FEMALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 338.00 (GMS)  
 << MICROSCOPIC TISSUE OBSERVATIONS >>  
 TISSUE / HISTOPATHOLOGIC FINDINGS  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS  
 UTERUS ..... TISSUE IS MISSING

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
 PRINTED: 02-FEB-89  
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INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605

ANIMAL NUMBER: 86D0809/PRETEST= Q86D0809 SEX: FEMALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 380.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	2.064	0.5432 %	1.0000	OK
11-MAR-87	92/14	LIVER	12.629	3.3234 %	6.1187	OK
11-MAR-87	92/14	KIDNEY	2.158	0.5679 %	1.0455	LOW
11-MAR-87	92/14	HEART	1.184	0.3116 %	0.5736	OK
11-MAR-87	92/14	SPLEEN	0.562	0.1479 %	0.2723	LOW
11-MAR-87	92/14	ADRENAL	0.092	0.0242 %	0.0446	HIGH
11-MAR-87	92/14	OVARIES	0.200	0.0526 %	0.0969	OK

ORGAN NAME  
 WHOLE BODY  
 GROSS ORGAN OBSERVATIONS  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 MICROSCOPIC TISSUE OBSERVATIONS  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

LUNGS  
 -INFLAMMATION, CHRONIC, FOCAL  
 NOT SPECIFIED (TRACE)

KIDNEY  
 -MINERALIZATION  
 NOT SPECIFIED (TRACE)

SUBMANDIBULAR LN  
 -HYPERPLASIA, LYMPHOID  
 MISCELLANEOUS TISSUE  
 NOT SPECIFIED (TRACE)

Pathology Annex D (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY NUMBER: 2GLP8605  
 PRINTED: 02-FEB-89  
 PAGE: 90

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 860813/PRETEST= Q860813 SEX: FEMALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 331.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	1.853	0.5598 %	1.0000	OK
11-MAR-87	92/14	LIVER	10.761	3.2511 %	5.8073	OK
11-MAR-87	92/14	KIDNEY	2.390	0.7221 %	1.2898	OK
11-MAR-87	92/14	HEART	1.146	0.3462 %	0.6185	OK
11-MAR-87	92/14	SPLEEN	0.639	0.1931 %	0.3448	LOW
11-MAR-87	92/14	ADRENAL	0.110	0.0332 %	0.0594	HIGH
11-MAR-87	92/14	OVARIES	0.143	0.0432 %	0.0772	OK

ORGAN NAME  
 WHOLE BODY  
 NO GROSS LESIONS RECOGNIZED.

TISSUE / HISTOPATHOLOGIC FINDINGS  
 THYROID GLANDS  
 -CYST  
 EXORBITAL LACRIM  
 -INFLAMMATION/CHRONIC  
 THYMUS  
 UTERUS  
 JILATATION OF THE UTERINE LUMEN (HYDROMETRA)

THYROID GLANDS  
 -CYST  
 EXORBITAL LACRIM  
 -INFLAMMATION/CHRONIC  
 THYMUS  
 UTERUS  
 JILATATION OF THE UTERINE LUMEN (HYDROMETRA)

Pathology Annex D (cont.)



## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 PRINTED: 02-FEB-89  
 PAGE: 91  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
 ANIMAL NUMBER: 86D0813/PRETEST= Q86D0813 SEX: FEMALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 331.00 (GMS)  
 TISSUE / HISTOPATHOLOGIC FINDINGS  
 << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS  
 MAMMARY GLAND ..... TISSUE IS MISSING  
 ADRENAL ..... NOT SPECIFIED(TRACE)  
 -CORTICAL NODULAR HYPERTROPHY

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: ZGLP8605  
 STUDY START DATE: 10-DEC-86  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING  
 PRINTED: 02-FEB-89  
 PAGE: 92

ANIMAL NUMBER: 86D0816/PRETEST= Q86D0816 SEX: FEMALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 304.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	1.782	0.5862 %	1.0000	OK
11-MAR-87	92/14	LIVER	11.203	3.6852 %	6.2868	OK
11-MAR-87	92/14	KIDNEY	2.228	0.7329 %	1.2503	OK
11-MAR-87	92/14	HEART	0.947	0.3115 %	0.5314	OK
11-MAR-87	92/14	SPLEEN	0.512	0.1684 %	0.2873	LOW
11-MAR-87	92/14	ADRENAL	0.093	0.0306 %	0.0522	HIGH
11-MAR-87	92/14	OVARIES	0.176	0.0579 %	0.0988	OK

ORGAN NAME  
 WHOLE BODY  
 GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS  
 MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

SKIN  
 MAMMARY GLAND  
 BONE, STERNUM  
 TISSUE IS MISSING  
 TISSUE IS MISSING  
 TISSUE IS MISSING

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY NUMBER: 2GLP8605  
 PRINTED: 02-FEB-89  
 PAGE: 93  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

ANIMAL NUMBER: 86D0817/PRETEST= Q86D0817 SEX: FEMALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 340.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	1.862	0.5476 %	1.0000	OK
11-MAR-87	92/14	LIVER	12.961	3.8121 %	6.9608	OK
11-MAR-87	92/14	KIDNEY	2.154	0.6335 %	1.1568	OK
11-MAR-87	92/14	HEART	1.122	0.3300 %	0.6026	OK
11-MAR-87	92/14	SPLEEN	0.674	0.1982 %	0.3620	LOW
11-MAR-87	92/14	ADRENAL	0.090	0.0265 %	0.0483	HIGH
11-MAR-87	92/14	OVARIES	0.156	0.0459 %	0.0838	OK

ORGAN NAME  
 WHOLE BODY  
 NO GROSS LESIONS RECOGNIZED.  
 PRESENT  
 GROSS ORGAN OBSERVATIONS  
 KEYWORDS / PHRASES  
 SEVERITY GROSS FREE-TEXT COMMENTS

TISSUE / HISTOPATHOLOGIC FINDINGS  
 MICROSCOPIC TISSUE OBSERVATIONS  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

ALL REQUIRED TISSUES NORMAL

Pathology Annex D (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

PRINTED: 02-FEB-89  
 PAGE: 94

## INDIVIDUAL ANIMAL DATA REPORT

STUDY NUMBER: 2GLP8605

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

STUDY START DATE: 10-DEC-86

ANIMAL NUMBER: 86D0822/PRETEST= Q86D0822 SEX: FEMALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 279.00 (GMS)

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	1.873	0.6713 %	1.0000	OK
11-MAR-87	92/14	LIVER	8.323	2.9832 %	4.4437	LOW
11-MAR-87	92/14	KIDNEY	1.571	0.5631 %	0.8388	LOW
11-MAR-87	92/14	HEART	0.918	0.3290 %	0.4901	OK
11-MAR-87	92/14	SPLEEN	0.485	0.1738 %	0.2589	LOW
11-MAR-87	92/14	ADRENAL	0.085	0.0305 %	0.0454	HIGH
11-MAR-87	92/14	OVARIES	0.135	0.0484 %	0.0721	OK

<< GROSS ORGAN OBSERVATIONS >>  
 ORGAN NAME KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 TISSUE / HISTOPATHOLOGIC FINDINGS DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

HARDERIAN GLAND  
 -INFLAMMATION, CHRONIC NOT SPECIFIED(TRACE)

THYMUS TISSUE IS MISSING

LIVER  
 -INFLAMMATION, CHRONIC, MULTIFOCAL NOT SPECIFIED(TRACE)

KIDNEY  
 -MINERALIZATION NOT SPECIFIED(TRACE)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY  
 STUDY START DATE: 10-DEC-86  
 STUDY NUMBER: 2GLP8605  
 PRINTED: 02-FEB-89  
 PAGE: 95

ANIMAL NUMBER: 86D0830/PRETEST= Q86D0830 SEX: FEMALE DOSE GROUP: 6 SACRIFICE STATUS: FINAL SACRIFICE  
 DATE OF DEATH: 11-MAR-87 STUDY DAY OF DEATH: 92 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 332.00 (GMS)  
 STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

DATE	DAY/WEEK OF STUDY	ORGAN NAME	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
11-MAR-87	92/14	BRAIN	2.066	0.6223 %	1.0000	OK
11-MAR-87	92/14	LIVER	9.459	2.8491 %	4.5784	LOW
11-MAR-87	92/14	KIDNEY	2.164	0.6518 %	1.0474	OK
11-MAR-87	92/14	HEART	1.062	0.3199 %	0.5140	OK
11-MAR-87	92/14	SPLEEN	0.594	0.1789 %	0.2875	LOW
11-MAR-87	92/14	ADRENAL	0.071	0.0214 %	0.0344	HIGH
11-MAR-87	92/14	OVARIES	0.126	0.0380 %	0.0610	OK

ORGAN NAME << GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 WHOLE BODY NO GROSS LESIONS RECOGNIZED. PRESENT

TISSUE / HISTOPATHOLOGIC FINDINGS << MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

PANCREAS ..... NOT SPECIFIED (TRACE)  
 -CHRONIC INFLAMMATION

Pathology Annex D (cont.)

## Appendix O (cont.): PATHOLOGY

LETTERMAN ARMY INSTITUTE OF RESEARCH  
 DIV OF RES SUPP, PATH SERV GP  
 SPECIES: RAT/SPRAGUE-DAWLEY

INDIVIDUAL ANIMAL DATA REPORT  
 STUDY NUMBER: 2GLP8605  
 STUDY START DATE: 10-DEC-86

PRINTED: 02-FEB-89  
 PAGE: 96

ANIMAL NUMBER: 86D0839/PRETEST= Q86D0839 SEX: FEMALE DOSE GROUP: 6 SACRIFICE STATUS: INTERIM SACRIFICE 2  
 DATE OF DEATH: 07-JAN-87 STUDY DAY OF DEATH: 29 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 206.00 (GMS)

STUDY TYPE: SUB-CHRONIC/180 DAY FEEDING

DATE	DAY/WEEK OF STUDY	<< ORGAN WEIGHTS >>	ABSOLUTE ORGAN WEIGHT (GMS)	RELATIVE % OF BODY WEIGHT	ORGAN TO BRAIN WEIGHT RATIO	ORGAN STATUS
07-JAN-87	29/5	BRAIN	1.885	0.9150 %	1.0000	OK
07-JAN-87	29/5	LIVER	7.632	3.7049 %	4.0488	OK
07-JAN-87	29/5	KIDNEY	1.728	0.8388 %	0.9167	OK
07-JAN-87	29/5	HEART	0.966	0.4689 %	0.5125	OK
07-JAN-87	29/5	SPLEEN	0.649	0.3150 %	0.3443	HIGH
07-JAN-87	29/5	ADRENAL	0.084	0.0408 %	0.0446	HIGH
07-JAN-87	29/5	OVARIES	0.151	0.0733 %	0.0801	HIGH

<< GROSS ORGAN OBSERVATIONS >>  
 KEYWORDS / PHRASES SEVERITY GROSS FREE-TEXT COMMENTS  
 NO GROSS LESIONS RECOGNIZED. PRESENT

<< MICROSCOPIC TISSUE OBSERVATIONS >>  
 DISTRIBUTION (SEVERITY) / SPECIAL COMMENTS

BRAIN ..... CEREBELLUM ONLY IS MISSING.

EXORBITAL LACRIM .....  
 -INFLAMMATION, CHRONIC ..... NOT SPECIFIED (TRACE)

KIDNEY .....  
 -MINERALIZATION ..... NOT SPECIFIED (TRACE)

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